

The Fifteenth Judicial Circuit Court In
and For Palm Beach County, Florida
Civil Division
Case No: CL 95-1466 AH
THE STATE OF FLORIDA, et al.,
Plaintiffs,
v
THE AMERICAN TOBACCO COMPANY, et al.,
Defendants.

Vidiotaped Deposition of James L. Whittle, M.D.
Volume II

Taken before Cynthia Hektner, Court
Reporter and Notary Public in and for the State of
Florida at large, pursuant to notice of taking
deposition filed by the Defendant Lorillard Tobacco
Company in the above cause.

Monday, April 14, 1997
One Clearlake Centre
250 Australian Avenue South
Suite 700
West Palm Beach, Florida 33401
1:30 p.m.

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APPEARANCES:

On behalf of the Plaintiffs:
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BY: ALEXANDRA M. WAGNER, ESQUIRE

On behalf of the Defendant Lorillard:
SHOOK, HARDY & BACON, L.L.P.
One Kansas City Place
1200 Main Street
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BY: ANTHONY J. ANDRADE, ESQUIRE

ALSO PRESENT: Wendell L. Stone, Ph.D.

Property of: Ness, Motley
Main Pl File Room
Charleston, SC

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DIRECT CONTINUED (James L. Whittle, M.D.)
BY MR. ANDRADE:

Q. Doctor, I wanted to ask you some
questions about the concept of threshold. Are you
familiar with the medical or scientific concept of
threshold?

A. Maybe if you could explain a little
bit.

Q. That would involve the requirement of a
certain dose before a certain effect can be seen.
Okay, do you believe -- in taking smoking histories
of your patients, do you usually try to get some
kind of quantitative information?

A. Yes, I do.

Q. And do you ask for that in pack year
histories?

A. Yes.

Q. And why is that significant to you as a
treating physician?

A. Again, my data is or my clinical
experience in the past is more of a threshold. I've
heard, for some of the pulmonary problems, of 20
pack years. And although I don't really use that
statistically to tell me how -- what that is related

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1 to coronary disease, but it just helps me quantitate
2 how much a patient has been smoking.

3 Q. Okay. So there is a thinking among
4 medical professionals that the amount smoked or
5 perhaps how much you smoked for certain units of
6 time might correlate with one's risk for developing
7 a particular disease?

8 A. Again, I don't know the literature in
9 that regard well enough to be able to say that. To
10 me, I use that more as a means of being able to
11 quantitate how much a person has smoked.

12 Q. Okay. Do you believe that there is a
13 threshold in terms of how much one must smoke before
14 they would be at risk for developing a particular
15 disease or before they do develop a particular
16 disease in the cardiovascular field?

17 A. I don't know that data well enough to
18 be able to say.

19 Q. Okay. Now, let me ask you a general
20 question. If I told you I had just eaten 100 eggs
21 over my lifetime and I stayed away from other
22 sources of cholesterol, would you consider that to
23 be an important risk factor for development of
24 cardiovascular disease in me as an individual?

25 A. It would depend upon the other factors

1 of what your native cholesterol is as well. It
2 might be of help, but it would not be an
3 overwhelming strong factor.

4 Q. If you had a person, hypothetically,
5 with no risk factors for cardiovascular disease in
6 their background and they just smoked, say, 100
7 cigarettes, in your opinion could 100 cigarettes
8 cause coronary heart disease in an individual?

9 A. Again, I think you are asking me
10 information that I -- I'm really not -- don't have
11 any expertise in.

12 Q. Would you be concerned if someone
13 smoked 100 cigarettes, one of your patients, and
14 then quit? Would you tell them that they were at
15 risk or that they would develop cardiovascular
16 disease because of their smoking history?

17 A. Again, I don't know the scientific data
18 well enough to be able to really say.

19 Q. I'm speaking now more of common sense
20 advice you might give your patients.

21 A. I think that would be a reasonable
22 statement.

23 Q. If I told you I just smoked a cigarette
24 a day for one year and then quit, would you advise
25 me that I would be more probable than not to develop

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1 cardiovascular disease because of my smoking?

2 MR. MIKHAIL: Object to the form.

3 Depending on what other things?

4 BY MR. ANDRADE:

5 Q. Well, I'd like to keep on the same
6 hypothetical: I've lived a perfect life, eliminated
7 all my risk factors for cardiovascular disease. I
8 just smoked one cigarette a day for one year then I
9 stopped. Would you consider that to be -- to put me
10 at risk for cardiovascular disease?

11 A. I don't think it would put you -- this
12 is just purely a conjecture on my part. I don't
13 think it would be a significant risk.

14 Q. All right. Would you think -- would
15 you advise me that I would more probably than not
16 develop cardiovascular disease based on one
17 cigarette a day for one year?

18 A. Again, I don't know that data well
19 enough to be able to say anything with any real
20 scientific basis.

21 Q. Okay. Just based on your clinical
22 experience -- and again, I'm not going to go off the
23 graduation scale. I'm going to stop at this
24 question.

25 Based on your clinical experience, if I

1 came to you as a patient and I said, Doctor, I'm a
2 smoker. I've smoked one cigarette a day, you know,
3 for 365 days, one year, and then I quit. Am I at
4 risk for cardiovascular disease in your opinion?

5 A. I would say if you don't do it any
6 more, you probably will not be.

7 Q. Since you would basically get a smoking
8 history then try to use that information, that ought
9 to give you some idea, roughly, about the degree of
10 risk?

11 A. Yes.

12 Q. And if I came to you and I had a heart
13 problem, say I had coronary heart disease, and you
14 took my medical history and I said, Doctor, I may
15 have some other risk factors in my background, and I
16 give you good information, accurate information,
17 about diet, blood pressure, so on and so forth, but
18 I also told you I smoked, say, just 100 cigarettes,
19 no more, would you be of the opinion that the
20 cigarette smoking was the cause of my heart disease
21 in that case if I had other risk factors in my
22 background?

23 A. I can't say that but I would tell you
24 again, Don't do it anymore.

25 Q. Sure.

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1 A. And that would lessen your risk.
 2 Q. Have you ever seen a patient who just
 3 smoked a few cigarettes whose disease you would
 4 attribute to their smoking? Have you ever seen a
 5 patient who smoked, again, just maybe 100
 6 cigarettes, for a round number, whose cardiovascular
 7 disease you would attribute to their smoking?
 8 A. All I can tell you is I have seen
 9 people who smoked a very little who still had some
 10 coronary disease, but I cannot necessarily attribute
 11 one or the other because I don't know -- again, I'm
 12 not familiar with that data.
 13 Q. Okay. But no one who smoked just as
 14 few as, say, 100 cigarettes?
 15 A. I would think that would probably be
 16 unlikely.
 17 Q. I wanted to ask you a question about
 18 something we discussed just before the break. You
 19 had mentioned earlier that your personal practice
 20 consisted of approximately 5 percent Medicaid
 21 patients.
 22 A. No. I think what I said was it was
 23 less than 5 percent.
 24 Q. Excuse me. Less than 5.
 25 A. Yes.

1 Q. That's why I'm trying to use the word
 2 "approximately." Less than 5. And your opinions
 3 are based predominantly on your clinical
 4 experiences?
 5 A. That's correct.
 6 Q. Okay.
 7 Do you believe that one can apply
 8 clinical experiences from a patient -- based on a
 9 patient population of less than 5 percent Medicaid
 10 patients to a population of exclusively Medicaid
 11 patients?
 12 MR. MIKHAIL: Object to the form.
 13 THE WITNESS: With reference to
 14 coronary disease?
 15 BY MR. ANDRADE:
 16 Q. Yes. Your general experiences with
 17 respect to cardiovascular disease and all the risk
 18 factors, do you think that one's clinical experience
 19 based on a population of 5 percent Medicaid
 20 patients, or less than 5 percent, would be directly
 21 applicable to a population of 100 percent Medicaid
 22 recipients?
 23 A. I would have to say two things: One
 24 is, if when you say cardiovascular disease if you
 25 mean specifically coronary heart disease. And my

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1 clinical impression, from what I see, is that the
 2 disease process in both populations would be the
 3 same.
 4 Q. Could you repeat that, please.
 5 A. That the disease process itself would
 6 be the same and so I -- you perhaps could, but I
 7 don't see that much difference in the -- once the
 8 disease is manifest, I really don't appreciate much
 9 difference between Medicaid and non Medicaid. I
 10 don't appreciate any difference in the disease
 11 process in those two groups.
 12 Q. But you would agree that in your
 13 practice you have a fairly high percentage -- I
 14 think you said approximately 40 percent or so -- of
 15 elderly patients?
 16 A. Yes.
 17 Q. And in that respect your patient
 18 population might differ from a Medicaid population
 19 since the Medicaid recipients, I believe once they
 20 reach age 65, they would qualify for the Medicare
 21 program?
 22 A. Yes. Again, but still a heart attack
 23 is a heart attack.
 24 Q. Sure. But just in terms of the
 25 differences between your patient population in your

1 practice and a purely Medicaid population of
 2 patients, your practice would be different because
 3 you would have approximately 40 percent elderly
 4 people in your practice?
 5 A. The demographics are different but the
 6 disease is the same.
 7 Q. Sure. Whether you're old, poor, or
 8 wealthy, one can always develop coronary heart
 9 disease or peripheral vascular and so on?
 10 A. That's correct.
 11 Q. But in terms of the demographics, your
 12 patient population would be different from the
 13 Medicaid population since you would have 40 percent,
 14 approximately, of elderly patients in your
 15 population and you wouldn't have these in the
 16 Medicaid population?
 17 A. That's correct.
 18 Q. And you would also have, I think you
 19 said, although you couldn't put a percentage figure
 20 on it, a pretty good percentage of affluent people
 21 in your population of patients which wouldn't be in
 22 a purely Medicaid population?
 23 A. That's correct.
 24 Q. I wanted to show you a study, Doctor.
 25 I'll have it marked as, I guess, Defendant's Exhibit

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1 No. 5.
 2 (Thereupon, the document was marked
 3 Defendant Lorillard's Exb. No. 5 for
 4 Identification.)
 5 BY MR. ANDRADE:
 6 Q. All right. And this is a study
 7 entitled "A Survey of 246 Suggested Coronary Risk
 8 Factors," the first author being Paul Hopkins,
 9 published in the "Journal of Atherosclerosis."
 10 A. Utah?
 11 Q. I don't know, as a matter of fact.
 12 And I'd just like to read the
 13 introduction to you and ask you if you agree with
 14 it.
 15 "Studies of coronary heart
 16 disease (CHD) have led medical
 17 investigators to suggest an association
 18 with CHD for at least 246 factors.
 19 Though cause and effect relationships
 20 have not been demonstrated for the vast
 21 majority, consideration of these
 22 factors provides clues to CHD etiology
 23 and insight into possible preventive
 24 measures."
 25 Would you agree with that statement?

1 MR. MIKHAIL: If you need time to look
 2 at the article, feel free to do that.
 3 THE WITNESS: Well, I really can't make
 4 a comment if I agree because I don't know
 5 what factors they are referring to. So I
 6 would have to look at the whole body.
 7 BY MR. ANDRADE:
 8 Q. Okay.
 9 Would you agree that there are many
 10 risk factors for coronary heart disease?
 11 A. Yes.
 12 Q. I think I asked you to identify those
 13 risk factors, that you could, for coronary heart
 14 disease and you listed approximately five or six
 15 before the break, if my memory is correct.
 16 A. That's correct.
 17 Q. Right. And I just wanted to ask the
 18 question: Would you basically agree that there are
 19 many risk factors of coronary heart disease?
 20 A. There are many risk factors; whether
 21 there are 246, I would have to look at these.
 22 Q. All right, let me do it this way: Let
 23 me ask you some questions on some other risk factors
 24 and see if you would agree.
 25 Cholesterol levels, would they be a

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1 risk factor for coronary heart disease? And I'm not
 2 referring to the paper any longer.
 3 A. Okay.
 4 Q. Let me start again. Would cholesterol
 5 levels be a risk factor for coronary heart disease?
 6 A. Yes. But you have to qualify that a
 7 little bit. Because if you have other risk factors
 8 independent of hypercholesterolemia such as smoking,
 9 positive family history, in those situations what
 10 the cholesterol is, if you have -- if you are a
 11 nonsmoker with no family history, your cholesterol
 12 can be higher without an increased risk; if you are
 13 a smoker, it takes a lower value before there is
 14 really an increased risk, so I have to qualify that
 15 a little bit.
 16 Q. Were you aware of studies that control
 17 for other risk factors for cardiovascular disease,
 18 including coronary heart disease, that still report
 19 that cholesterol level are an independent factor for
 20 coronary heart disease?
 21 A. Yes. That's correct.
 22 Q. So if you had a population with no
 23 other coronary heart disease risk factors in their
 24 background but had high cholesterol levels, that
 25 would be a risk factor for coronary heart disease?

1 A. That's true. But I also have to add
 2 the caveat, and that is, for example, if you are a
 3 smoker, the cholesterol that is really acceptable is
 4 lower if you are a smoker than a nonsmoker because
 5 of the risk.
 6 Q. Doctor, I'm not asking you about any
 7 kind of potential interaction among risk factors.
 8 I'm asking the simple question: Is coronary heart
 9 disease -- for coronary heart disease, is
 10 cholesterol levels a risk factor independent of
 11 other factors in the sense that studies have
 12 controlled for those other factors and held them
 13 constant?
 14 A. That's correct.
 15 Q. Okay. Thank you.
 16 How about diabetes, is that a risk
 17 factor for coronary heart disease?
 18 A. Yes, it is.
 19 Q. And obesity?
 20 A. Yes, it is.
 21 Q. Personality type, so-called type A
 22 personality?
 23 A. That's -- I think that's questionable.
 24 Q. Can I ask why you question those
 25 studies that report that type A personality is a

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1 risk factor for coronary heart disease?
 2 A. That was much more popular maybe 20, 25
 3 years ago. And I think now maybe people are looking
 4 at that population and there may be a subset of that
 5 group who may constrict their coronaries under
 6 periods of stress. There -- it may be a risk factor
 7 but I don't think the association is quite as strong
 8 as it was assumed to be a number of years ago.
 9 Q. Stress itself has been reported to be a
 10 risk factor for coronary heart disease?
 11 A. Yes.
 12 Q. And exercise, lack of exercise, is a
 13 risk factor for coronary heart disease?
 14 A. Then you are starting -- you're
 15 starting to get into more of an association than a
 16 risk factor.
 17 Q. Do you believe --
 18 A. Because some of those are difficult to
 19 prove.
 20 Q. Do you believe that there are some
 21 individuals who, because of their lack of exercise,
 22 are at greater risk for coronary heart disease, all
 23 other factors being equal?
 24 A. That literature I do not know well
 25 enough to comment on.

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1 Q. All right.
 2 Do you advise your patients to take
 3 regular exercise?
 4 A. Yes.
 5 Q. If they have a sedentary lifestyle, do
 6 you advise them to do something three or four times
 7 a week to get their cardiovascular rate up?
 8 A. Yes. I know that they can reduce the
 9 risk by exercising regularly. But conversely, I
 10 don't know that a lack of exercise may contribute to
 11 the development of coronary heart disease.
 12 Q. Is your concern that there are so many
 13 risk factors that may play a role for coronary heart
 14 disease that it's very difficult to extricate them?
 15 MR. MIKHAIL: Object to the form.
 16 Extricate them from what?
 17 BY MR. ANDRADE:
 18 Q. From each other.
 19 A. I think there are certain risk factors
 20 in which the association is weak. And as we talked
 21 about age earlier, that there may be an association
 22 but I would -- I would hate to put it down as a
 23 cause. And -- but I think if you are talking about
 24 the major risk factors, then I think you can
 25 extricate some of those from the others.

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1 Q. All right. But it is not your opinion
 2 that there is no literature on some of these risk
 3 factors such as Type-A personality or age that do
 4 report a statistically significant increased risk
 5 for coronary heart disease and those risk factors?
 6 A. I'm a little -- if you could simplify
 7 your question.
 8 Q. It's not your testimony, is it, that
 9 there are no scientific studies that suggest that
 10 factors such as age and Type-A personality have been
 11 associated with an increased risk for coronary heart
 12 disease?
 13 A. What I am saying is there have been
 14 some people that have suggested that.
 15 I got lost in the double negatives
 16 there.
 17 Q. Have they suggested that in scientific
 18 studies?
 19 A. Yes.
 20 Q. Did you consider cardiovascular
 21 disease, and specifically coronary heart disease, to
 22 be a multi factorial disease?
 23 A. It can be. It not always is, but it
 24 can be.
 25 Q. There may be some individuals who only

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1 have one risk factor in their background that could
 2 account for the coronary heart disease?
 3 A. That's correct.
 4 Q. And there are some other individuals
 5 who may have many risk factors, some of them you
 6 have identified here today, that also might play a
 7 role in the combination in the development of
 8 coronary heart disease?
 9 A. That's correct.
 10 Q. When a patient first comes to you
 11 complaining of, say, chest pain, do you normally
 12 take a medical history of that individual?
 13 A. Yes.
 14 Q. And do you ask that person about risk
 15 factors that are in their individual background for
 16 coronary heart disease?
 17 A. Yes, I would.
 18 Q. And what would be some of the questions
 19 that you would ask a patient like that?
 20 A. Do you smoke? Are you a diabetic?
 21 Have you been hypertensive? Is there any premature
 22 coronary disease in your family?
 23 Q. Anything else of interest that you
 24 would question them on?
 25 A. Those would be the major things.

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1 Q. Would you be interested in their
2 cholesterol levels?
3 A. Yes.
4 Q. Would you be interested in observing or
5 maybe measuring the weight of the individual if they
6 appeared obese to you?
7 A. Yes.
8 Q. Okay. Would you be interested in
9 family history? Did you identify family history?
10 A. Yes, I did.
11 Q. Would you be interested in other
12 information about sedentary lifestyle versus
13 somebody who does a lot of physical exercise? Would
14 that be important for you to know?
15 A. It's important but I don't think it
16 really sways my diagnosis one way or the other.
17 Q. Would you be interested in the
18 magnitude of high blood pressure?
19 A. Yes, I would.
20 Q. So you would be interested if they did
21 have hypertension; is that right?
22 A. Yes.
23 Q. And you would probably have some
24 interest in the level of hypertension?
25 A. Right, and how well controlled it was.

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1 Q. Okay. And that would be true for
2 cholesterol levels as well?
3 A. Yes.
4 Q. Would you also be interested in whether
5 or not they are compliant with medication that may
6 have been prescribed for, say, high cholesterol
7 levels or high blood pressure?
8 A. Yes.
9 Q. Do you find that patients sometimes are
10 less than straightforward in terms of self reporting
11 information about their backgrounds?
12 A. With regard to?
13 Q. Well, for instance, with regard to
14 compliance with medication?
15 A. I think basically most people are
16 fairly honest. I mean, obviously, there are some
17 people that that is going to be a problem with but I
18 don't think that's an overwhelming issue.
19 Q. When individuals report to you that
20 they have these risk factors in their backgrounds, I
21 think you mentioned earlier, that you do counsel
22 them or advise them to try to reduce or eliminate
23 those factors; is that correct?
24 A. Yes, I do.
25 Q. So if I came to you and I was a smoker,

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1 you would advise me to stop smoking?
2 A. Yes, I would.
3 Q. If I -- I need some other hypothetical.
4 If I came to you and if I was overweight
5 considerably, you would advise me to lose weight?
6 A. Yes, I would.
7 Q. If I had high blood pressure, you might
8 even prescribe some medicine for me to treat the
9 high blood pressure?
10 A. That's correct.
11 Q. And for other things I could do to
12 reduce it, you would probably recommend those to me
13 as well?
14 A. Yes, I would.
15 Q. All right. And the same would be true
16 for other risk factors for cardiovascular disease or
17 coronary heart disease that you could detect in a
18 person's background: If there is a way of modifying
19 them or eliminating them you would offer that advice
20 to the patient?
21 A. Yes, I would.
22 Q. All right. I think earlier you
23 mentioned that you may have seen in your practice
24 only two individuals in your career who had coronary
25 heart disease but no risk factors in their

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1 background for coronary heart disease; is that
2 correct?
3 A. That's correct. That would be an
4 approximation. I would just say it's exceptionally
5 rare.
6 MR. MIKHAIL: You all referred to this
7 article as an exhibit but it didn't have a
8 sticker on it. Is this the one that is to be
9 marked?
10 MR. ANDRADE: Yes, I guess. I
11 apologize. I may have given it to you before
12 having it marked. I'll take care of that.
13 MR. MIKHAIL: Thank you.
14 BY MR. ANDRADE:
15 Q. Doctor, I'd like to hand you another
16 article entitled, "Identification and Relative
17 Weight of Cardiovascular Risk Factors." Again, the
18 lead author is Dr. Paul Hopkins. This was published
19 in, if I could find the name of the journal,
20 "Cardiology Clinic." And I'd like to have it
21 marked Defendant's Exhibit No. 6.
22 (Thereupon, the document was marked
23 Defendant Lorillard's Exb. No. 6 for
24 Identification.)
25

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1 BY MR. ANDRADE:

2 Q. I would like to direct your attention
3 if I could to the first page, the left-hand side,
4 the second full paragraph. I would like to read it
5 to you and ask you if you agree with it.

6 "The most important risk factors
7 for cardiovascular disease include age,
8 sex, strong positive family history,
9 cigarette smoking, systolic and
10 diastolic hypertension, plasma levels
11 of total and high density lipoprotein
12 (HDL), cholesterol, diabetes and
13 obesity. Some would include the Type-A
14 Coronary prone personality. All of
15 these major risk factors should be
16 considered in assessing any
17 individual's risk."

18 Would you agree with that statement?

19 A. The only thing that I would disagree
20 with a little bit, as we talked about earlier, was
21 age and sex. Again, I'm not sure I would look upon
22 that as a risk factor as such. Certainly as an
23 association, as we discussed earlier, but otherwise
24 I would pretty much agree.

25 Q. The definition that I read you earlier,

1 I believe, identified risk factor as a factor that
2 does have a statistical association with the
3 occurrence of a disease such as coronary heart
4 disease. In that sense, would you view factors such
5 as age or Type-A personality as being risk factors
6 but perhaps of a lesser magnitude than some of the
7 others that are listed here?

8 A. Yes.

9 Q. May I direct your attention to the
10 second column, and it's the second full paragraph,
11 again. If I may read it to you and ask you if you
12 agree with it.

13 "For a practicing physician, there
14 is little purpose served by trying to
15 rank the major risk factors in order of
16 importance. Rather, it is important to
17 recognize that all of them have a
18 potential role -- " Excuse me. " --
19 potential major role, and the relative
20 importance of risk factors in
21 individual patients is the practical
22 question of prime importance.
23 Furthermore, a broad knowledge of many
24 risk factors, some less well
25 recognized, may be useful in minimizing

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1 an individual's risk. For example,
2 dialysis can cause carnitine
3 deficiency, which may, in turn, lead to
4 lipid abnormalities and increased CHD
5 risk."

6 Would you agree with that?

7 A. Not quite. And that is that in my
8 experience that if I see a patient who is -- if I
9 had two patients the same otherwise, and, for
10 example, one smoked and one did not, then the
11 smoking, to me, would carry more weight, would make
12 me think more of coronary disease.

13 Q. So you would personally rank risk
14 factors in individuals' backgrounds in trying to
15 come to some kind of causal conclusion?

16 A. If I am faced with a patient with chest
17 discomfort, there are some risk factors that I would
18 give more weight to, yes.

19 Q. Would you always rate smoking as a more
20 significant risk factor than any other risk factor
21 in any other individual's background?

22 A. The only risk factor that I would
23 probably place equal to that is diabetes.

24 Q. Doctor, if I came to you and I told you
25 that my maternal and paternal grandparents died of

1 heart attack and that my parents died of heart
2 attacks, and I also told you and reported correctly
3 that I smoked a pack a day of cigarettes for ten
4 years, would you consider cigarette smoking to be
5 the most important risk factor in my background?

6 A. Again, I don't know the data well
7 enough about the correlation between the amount of
8 smoking and the risk of coronary disease. I think I
9 would -- the other question I would have for you is,
10 is what age were your parents when they had heart
11 attacks?

12 Q. But assuming that I gave you
13 information that they were all 55 years old when
14 they had their coronaries, would you still rank
15 smoking as the No. 1 risk factor?

16 A. In that case, if they both had heart
17 attacks at 55, that's a little bit difficult to say
18 because that would qualify as premature coronary
19 disease in both males and females in which case then
20 you would also have to think about is there a
21 congenital hypercholesterolemia present.

22 Q. So it's fair to say that you wouldn't
23 automatically rank smoking as the number one factor
24 in a person's background without first gathering
25 complete information on other risk factors in the

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1 individual's background.
2 A. That's correct.
3 Q. And there may indeed be some patients
4 who have chronic hypercholesterolemia, there may be
5 some patients with chronic hypertension who are
6 relatively light smokers, say, five pack years. And
7 in a case like that, you might place more weight on
8 the high cholesterol and the high blood pressure; is
9 that correct?
10 A. Again, I don't know that data well
11 enough from an epidemiologic point of view to know
12 the correlation.
13 Q. But I am talking about your clinical
14 judgment because you did say that you do place more
15 or less emphasis on certain risk factors in a given
16 individual's background?
17 A. In the scenario that you have just
18 painted, I would agree with you.
19 Q. You would put more emphasis in that
20 hypothetical on the high cholesterol levels and high
21 blood pressure?
22 A. Probably so.
23 Q. Okay. So it would depend on the
24 individual, if that's the case?
25 A. That's correct.

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1 begins, "Consider the unknown factors." Can you
2 find that, Doctor?
3 A. Yes.
4 Q. If I can read it to you, please, and
5 ask if you agree with it.
6 "Consider the unknown factors in
7 CHD. Only 50 percent of the risk of
8 disease can at present be accounted
9 for by the known risk factors.
10 Consider our ignorance of the
11 importance of prostaglandins,
12 thromboxanes, prostacyclins,
13 platelet-derived growth factors, the
14 'omega-3' polyunsaturated fatty
15 acids from marine fish, procoagulant
16 plasma factors, and a large number of
17 additional host and environmental
18 factors. This is a time for more
19 formal and informal investigation by
20 practitioners of medicine."
21 Would you agree with that statement?
22 A. I don't know that. Again, I haven't
23 read the body of the -- of the paper. The only
24 thing that would concern me is the date on this is
25 1986. And in the last 11 years there have been

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1 Q. You wouldn't make any generalities and
2 say that if someone smokes that that, in your
3 opinion, would always be the most important risk
4 factor in their background, you would have to take
5 each case based on its own facts?
6 A. That's correct.
7 Q. Okay.
8 MR. ANDRADE: I'll give you another
9 article, and I'd like to have it marked as
10 Defendant's Exhibit No. 7, please.
11 (Thereupon, the document was marked
12 Defendant Lorillard's Exb. No. 7 for
13 Identification.)
14 BY MR. ANDRADE:
15 Q. And this article is entitled, "Mass
16 Intervention versus Screening and Selective
17 Intervention for the Prevention of Coronary Heart
18 Disease," from the medical journal of JAMA.
19 And I see commentaries, so I don't see
20 the author's name on the first page. Okay, it's
21 Robert Olson.
22 If I could direct your attention,
23 please, to the next to the last page, page 2206, the
24 second column and the second full paragraph after
25 the heading "Screening As An Alternative," it

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1 tremendous advances in the understanding, on a
2 molecular basis, of what happens.
3 For example, the data that came out
4 about lowering cholesterol has only been out about
5 three or four years, so I really would have to know
6 the whole article and really, in light of the way
7 things are now, I don't know that this is a valid
8 statement.
9 Q. Would you agree, given current
10 knowledge, that only 50 percent of the risk of
11 coronary heart disease can at present be accounted
12 for known risk factors? And again, now, I'm not
13 reading from the paper. I'm putting that question
14 to you as an independent question.
15 A. Again, I am not as familiar with the
16 epidemiologic data, so it's a little bit difficult
17 for me to answer that.
18 Q. So you don't feel as though you can
19 respond to that question?
20 A. No, I really can't.
21 Q. You mentioned only two of your
22 patients, or you said extremely rare, to have a
23 patient with coronary heart disease with no known
24 risk factors or risk factors known to you in their
25 backgrounds. Would that be a very small percentage

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1 of your total patients who have coronary heart
2 disease?
3 A. Extremely small. Extremely small.
4 Q. So that would be at variance with at
5 least what Olson reported in 1982, that
6 approximately 50 percent of coronary heart disease
7 cases can be explained by risk factors that were
8 known at that time?
9 A. But you also have to remember that in
10 1986 the definition of the normal cholesterol was
11 much higher than it is now. So I don't know if that
12 was included within this data or not. You know,
13 when the NCEP guidelines came out about three or
14 four years ago our definition of what's normal for
15 hypercholesterolemia changed dramatically. So
16 again, I don't know at what level this data was
17 looked at.
18 Q. Over the years in terms of ability to
19 diagnose cardiovascular diseases --
20 A. I'm sorry. I was reading a sentence
21 here that was particularly germane.
22 Q. I'm sorry. I thought you were finished
23 with your response and I was going on with the next
24 question because I finished with that paper a while
25 ago, about three or four questions ago. I'm sorry

1 if you had the misimpression that I was still asking
2 questions on the paper --
3 A. May I read a sentence?
4 Q. Well, I think at this point it wouldn't
5 be responsive because there is no question pending.
6 MR. MIKHAIL: If you need to, complete
7 your answer.
8 I will insist that he be allowed to
9 complete his answer.
10 BY MR. ANDRADE:
11 Q. Well, what question are you -- Okay,
12 Dr. Whittle, you are not allowed to just make
13 statements, so if you can tell me what question you
14 are responding to because I stopped --
15 A. The question --
16 Q. If you let me finish, please.
17 I stopped asking questions on that
18 article about four questions ago.
19 MR. MIKHAIL: No, you didn't. He was
20 answering the question and he was discussing
21 what we knew about cholesterol levels
22 compared to what we know now.
23 BY MR. ANDRADE:
24 Q. That was in response to a question that
25 I put to you that was outside the quote from that

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1 paper.
2 A. The last question that you asked me was
3 about would I agree that 50 percent of the risk
4 factors can be accounted for. And what I was
5 commenting on in that response was with this paper
6 being ten years old, not knowing what they included,
7 and then I saw this one sentence that goes on to
8 support that and that's what I'd like to read.
9 Q. Go ahead.
10 A. And that is that, "History of heart
11 attack--" let's see, "--diabetes
12 melitis, a serum cholesterol of 350 or
13 a diastolic blood pressure greater
14 than 115 were grounds for elimination."
15 Now, our definition of what we would
16 eliminate in something like this is dramatically
17 lower, so again, that's why I say that this article
18 may not be particularly pertinent at this day and
19 age.
20 Q. Doctor, we were talking a few minutes
21 ago about evaluating individuals for risk factors
22 for coronary heart disease. Would you agree that
23 one cannot take a particular risk factor identified
24 in a group of people from an epidemiological study
25 and apply those findings to the individual case

1 before the practitioner?
2 A. Could you say that one more time?
3 Q. Sure. Let me give you an example.
4 If you have an epidemiological study
5 that reports obese people having a significantly
6 increased risk rate of cardiovascular disease, say
7 coronary heart disease specifically, could you take
8 that finding and apply it to one individual that you
9 were treating that was obese without regard to all
10 other risk factors in his or her background?
11 A. Without regard to other risk factors?
12 Q. Yes.
13 A. I would have to evaluate that patient
14 and that would be a factor. If they are obese and
15 there is an increased association, that would,
16 again, make me more suspicious.
17 Q. Would you agree that if a risk factor,
18 in your opinion, is causally related in populations
19 to the development of cardiovascular disease, that
20 just because an individual has that risk factor
21 doesn't mean that was the cause of their particular
22 case of cardiovascular disease?
23 A. Depends on which risk factor you are
24 referring to. There are some -- out of this long
25 list that you've given us awhile ago, there are some

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1 that I would consider more associated and there are
 2 some that I would consider more on a causal basis.
 3 Q. Doctor, are you familiar with the
 4 "Surgeon General's Report on Nutrition and Health"?
 5 A. No, I am not.
 6 Q. Have you ever heard of the "1988
 7 Surgeon General's Report on Nutrition and Health"?
 8 A. I'm not familiar with that.
 9 Q. Okay. You would agree that dietary
 10 habits and nutrition are risk factors for the
 11 development of cardiovascular disease?
 12 A. I would agree that the
 13 hypercholesterolemia that may result from that may
 14 be.
 15 Q. And those are obviously tied to dietary
 16 habits?
 17 A. In part.
 18 Q. Would the Surgeon General's views on
 19 the effects of dietary nutritional habits on
 20 coronary heart disease be of interest to you as an
 21 expert, in developing expert opinions?
 22 A. Yes.
 23 Q. But haven't -- you said you haven't
 24 heard of the report so obviously you haven't
 25 reviewed the report --

1 A. That's correct.
 2 Q. -- in preparation for your testimony
 3 here today?
 4 A. That's correct.
 5 Q. Would you consider the "Surgeon
 6 General's Report on Nutrition and Health" to be
 7 important information for an expert to have
 8 available in formulating his or her opinions in the
 9 area of cardiovascular disease?
 10 A. It may be, given the context in which
 11 it is being used.
 12 MR. ANDRADE: Could we have that
 13 marked, please, for identification. I guess
 14 it would be Defendant's Exhibit 8.
 15 (Thereupon, the document was marked
 16 Defendant Lorillard's Exb. No. 8 for
 17 Identification.)
 18 BY MR. ANDRADE:
 19 Q. And again, let me just read into the
 20 record, it is "The Surgeon General's Report on
 21 Nutrition and Health, 1988." It's a large document.
 22 If I could ask you, Doctor, to look at
 23 page 86, please. Again, I'd like to read the
 24 statement. It's the first paragraph under the title
 25 on the left-hand column, "High Blood Cholesterol."

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1 "An extensive body of clinical
 2 evidence supported by animal,
 3 epidemiologic and metabolic studies has
 4 established the relationship between
 5 high blood cholesterol and CHD risk
 6 (Grundy 1986). The relationship is
 7 strong, continuous and graded."
 8 Would you agree with that statement?
 9 A. Yes.
 10 Q. If I could ask you to turn to pages 91
 11 and 92, please. Starting at the very bottom of 91,
 12 lower right-hand column. I would like to read a
 13 statement and ask if you agree with it.
 14 "Although there are many
 15 determinates of blood cholesterol
 16 levels, no modifiable factor has been
 17 shown to influence cholesterol and LDL
 18 more profoundly than diet."
 19 Would you agree with that?
 20 A. No, I would not.
 21 Q. And why not?
 22 A. The reason is that in many patients
 23 with a dietary intervention you may only be able to
 24 lower their cholesterol 15 percent or so. And so in
 25 a large number of patients there may be more of a

1 metabolic problem than a dietary problem.
 2 Q. So you would disagree with the Surgeon
 3 General on this point?
 4 A. Yes, I would. But again, though, I
 5 would disagree with the Surgeon General in 1986.
 6 Q. This is 1988.
 7 A. 1988. Excuse me. I'm off two years.
 8 Q. Would you still disagree with the
 9 Surgeon General on this point today?
 10 A. Yes.
 11 Q. I'd like to read you another statement,
 12 Dr. Whittle.
 13 "For more than 50 years, research
 14 has suggested that diet is a, if not
 15 the, major environmental cause of
 16 coronary atherosclerosis."
 17 Would you agree with that statement?
 18 A. Could you read that one more time,
 19 please?
 20 MS. WAGNER: Do we have a copy? Maybe
 21 we can follow along.
 22 MR. ANDRADE: Sure. If I am reading
 23 from a particular piece of literature in
 24 front of me, I'll be happy to give Dr.
 25 Whittle a copy; at other times there are

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1 statements I will offer to the Doctor that
2 are statements that I would like to know if
3 he would agree or disagree.
4 BY MR. ANDRADE:
5 Q. "For more than 50 years, research has
6 suggested that diet is a, if not the, major
7 environmental cause of coronary atherosclerosis."
8 A. I can't -- I can agree with it
9 partially but not totally. Because, again, when you
10 are looking at people with elevated cholesterols,
11 there are two factors you have to consider: One is
12 the amount of fat that is ingested, and also how the
13 fat that is ingested is metabolized. So I would --
14 so it is a little bit difficult to just make it a
15 blanket statement. Some people may eat a very low
16 fat diet and still have very elevated cholesterols.
17 Q. Would you agree that diet is a major
18 environmental cause of atherosclerosis?
19 A. It is a significant cause.
20 Q. Would you agree that it is a major
21 cause? Or in your words would "major" equate to
22 "significant"?
23 A. I would use more significant than
24 major.
25 Q. Doctor, are you familiar with the

1 Surgeon General Koop's program, Shape Up America?
2 A. Not really.
3 Q. So you've not read any materials
4 related to that?
5 A. No.
6 THE COURT REPORTER: Would this be a
7 good time to change paper?
8 MR. ANDRADE: Yes.
9 (Thereupon, a discussion was held off
10 the record.)
11 (Thereupon, the document was marked
12 Defendant Lorillard's Exb. No. 9 for
13 Identification.)
14 BY MR. ANDRADE:
15 Q. I think I've handed a document to you,
16 Dr. Whittle, that we've marked as Defendant's
17 Exhibit No. 9, and that is entitled "Shape Up
18 America," by Dr. C. Everett Koop.
19 Just for clarity, you have not seen
20 this document before?
21 A. That's correct.
22 Q. Nor have you read it before?
23 A. No.
24 Q. Okay. May I direct your attention to
25 the -- it's the second page of the document, the

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1 upper left-hand column. And it's in the second
2 paragraph, about halfway through, starting with the
3 word "obesity." I'm going to try to point to it on
4 my copy to help serve as a guide.
5 A. Did you say obesity?
6 Q. Right. I'll let you read that to
7 yourself.
8 "Obesity is responsible for more
9 than 300,000 premature deaths each year
10 in the United States."
11 Would you agree with that statement?
12 A. I have no knowledge of that. I can't
13 really comment whether it's true or not.
14 Q. Do you consider the Surgeon General to
15 be a credible source of information on the nation's
16 health?
17 A. Again, I don't know where his
18 statistics came from so I don't know if that's --
19 Q. The question is: Do you consider the
20 Surgeon General to be a credible source of
21 information on the nation's health?
22 A. I would have to know what he's talking
23 about. I can't think of any reason for him to lie.
24 MR. MIKHAIL: Do you. Do you consider
25 him reliable?

1 BY MR. ANDRADE:
2 Q. Do you consider him a reliable source
3 of information on the nation's health? You, Dr.
4 Whittle, would you consider the Surgeon General a
5 reliable source of information on the nation's
6 health?
7 A. It would depend on what he's talking
8 about. He's a pediatric surgeon.
9 Q. So as a pediatric surgeon do you think
10 Dr. Koop is unqualified to give opinions on health
11 issues?
12 MR. MIKHAIL: Let me make an objection
13 here. I want to understand. I think it's
14 important to understand. Is this an article
15 or a publication as Surgeon General or is
16 this simply an article by him as a physician?
17 MR. ANDRADE: This is an article by Dr.
18 Koop. If I can find a given -- if you look
19 on the second page, we have marked the date.
20 So this is authored at a time when Dr. Koop
21 was not the U.S. Surgeon General.
22 THE WITNESS: That's correct.
23 MR. MIKHAIL: I just wanted to make
24 sure I understand. When he was speaking, he
25 wasn't speaking as Surgeon General of the

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1 United States.
 2 THE WITNESS: That's correct.
 3 MR. ANDRADE: Just let me ask the
 4 question.
 5 BY MR. ANDRADE:
 6 Q. Dr. Koop, as the former Surgeon
 7 General -- you recognize him as the former Surgeon
 8 General of the United States?
 9 A. Yes.
 10 Q. Okay. Do you consider Dr. Koop to be a
 11 credible source of information about health issues
 12 in the United States?
 13 A. By and large, yes.
 14 Q. Now, do you agree with his statement
 15 that obesity is responsible for more than 300,000
 16 premature deaths each year in the United States?
 17 A. I don't know.
 18 Q. Do you have any reason to disagree with
 19 Dr. Koop?
 20 A. I have no reason to disagree nor do I
 21 have any reason to agree.
 22 Q. If I could direct your attention to the
 23 middle of the second page, Dr. Whittle. After some
 24 of those statistics, do you see the portion that
 25 starts, "Medical Research"?

1 A. Yes.
 2 Q. All right. If I may read it to you.
 3 "Medical research has confirmed
 4 the startling link between weight and
 5 disease. Weight contributes to five of
 6 the ten leading causes of death in the
 7 U.S. including heart disease, high
 8 blood pressure and stroke, diabetes,
 9 and some cancers."
 10 Would you agree with that statement?
 11 A. It certainly contributes to heart
 12 disease, to high blood pressure, stroke and
 13 diabetes. Cancer, I don't know.
 14 Q. You have no reason to disagree with
 15 that?
 16 A. Nor to agree.
 17 MR. MIKHAIL: As to cancer? As to all
 18 of it?
 19 THE WITNESS: As to cancer.
 20 BY MR. ANDRADE:
 21 Q. As to cancer, you are just -- you are
 22 just saying that you have no reason to disagree or
 23 agree with Dr. Koop regarding that statement as it
 24 relates to cancer?
 25 A. That's correct.

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1 (Thereupon, the documents were marked
 2 Defendant Lorillard's Exb. Nos. 10 and 11,
 3 respectively, for Identification.)
 4 BY MR. ANDRADE:
 5 Q. I would hand you another article marked
 6 Defendant's Exhibit No. 10, and that's entitled,
 7 "Physical Activity and Health, A Report of the
 8 Surgeon General, 1996." Have you seen this document
 9 before, Dr. Whittle?
 10 A. No, I have not.
 11 Q. Could I ask you to turn your attention
 12 to page 7, please.
 13 A. Roman numeral or regular page 7?
 14 Q. I believe it's regular page 7. If you
 15 give me a chance, let me find a better cite.
 16 Were you aware, Dr. Whittle, that the
 17 Surgeon General had authored a report on physical
 18 exercise and health?
 19 A. No, sir.
 20 Q. Were you aware that the Surgeon General
 21 considered regular physical activity to be as
 22 important as not smoking in terms of cardiovascular
 23 disease and risk? I'm not reading from the paper
 24 yet.
 25 A. I am not familiar with that statement.

1 Q. So you were not aware that the Surgeon
 2 General viewed physical activity to be a risk factor
 3 that was as important as not smoking for coronary
 4 heart disease?
 5 MR. MIKHAIL: I object as to the form,
 6 if you are actually quoting. Are you
 7 actually quoting from the Surgeon General's
 8 Report, "as important as"?
 9 MR. ANDRADE: I believe that may be a
 10 quote.
 11 MR. MIKHAIL: I think it's just only
 12 fair to the witness who is being asked to
 13 agree or disagree to say exactly what the
 14 Surgeon General said.
 15 MR. ANDRADE: Excuse me. That is not a
 16 quote, so let me rephrase that question. I
 17 apologize for the confusion.
 18 BY MR. ANDRADE:
 19 Q. Are you aware that the U.S. Surgeon
 20 General considered regular physical activity to be
 21 as important as smoking cessation insofar as
 22 coronary heart disease risk is concerned?
 23 A. I am not familiar with the presence of
 24 that statement.
 25 Q. May I turn your attention to page 7,

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1 and it is indeed -- the first chapter on page 7 and
2 if we can just look at the left-hand column, most of
3 the way down, No. 2, if I could read that statement
4 and ask if you agree with it.

5 "The level of decreased risk of
6 coronary heart disease attributable to
7 regular physical activity is similar to
8 that of other lifestyle factors such as
9 keeping free from cigarette smoking."
10 Do you agree with that statement?

11 A. Let me just read this again.

12 Q. Sure. Take your time.

13 A. The way I read the statement, it
14 doesn't make sense. Oh, okay. I personally
15 disagree.

16 Q. And why?

17 A. Because at least in my clinical
18 experience I think that not smoking is much more
19 important, as far as preventing coronary disease,
20 than regular exercise.

21 Q. Do you think your personal clinical
22 experience would be more definitive on this
23 scientific point than the U.S. Surgeon General's
24 Report?

25 MR. MIKHAIL: I object to the form.

1 THE WITNESS: I also don't know upon
2 what information this is based.

3 BY MR. ANDRADE:

4 Q. Your clinical experience would be based
5 upon observations of how many patients, Dr. Whittle?

6 A. Over the years, I would guess probably
7 50 or 60,000.

8 Q. Have you conducted a scientific study
9 of your patient population on the issue of whether
10 or not regular physical activity would have the same
11 effect on coronary heart disease risk as not
12 smoking?

13 A. No, I have not.

14 Are you finished with this one?

15 Q. Yes.

16 (Thereupon, the document was marked
17 Defendant Lorillard's Exb. No. 12 for
18 Identification.)

19 BY MR. ANDRADE:

20 Q. Let me hand you what's been marked as
21 Defendant's Exhibit No. 12. It's an article
22 entitled, "Influences of Cardiorespiratory Fitness
23 and Other Precursors on Cardiovascular Disease and
24 All-Cause Mortality in Men and Women." The first
25 author is Steven N. Blair, and the document appeared

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1 in JAMA.

2 May I direct your attention to the
3 first page in the section marked "Conclusions," and
4 I'd like to read that to you and ask you if you
5 disagree -- if you would agree with me.

6 "Low fitness is an important
7 precursor of mortality. The protective
8 effect of fitness held for smokers and
9 nonsmokers, those with and without
10 elevated cholesterol levels or elevated
11 blood pressure, the unhealthy and
12 healthy persons. Moderate fitness
13 seems to protect against the influence
14 of these other predictors on mortality.
15 Physicians should encourage sedentary
16 patients to become physically active
17 and thereby reduce the risk of
18 premature mortality."

19 Would you agree with that statement?

20 A. I can't make any comments because I
21 don't know how the study was designed and how it
22 was -- I don't know if their data supports this. I
23 would have to read through the article and see.

24 Q. Now, are you aware of any studies that
25 would cause you to disagree with the statement?

1 A. No.

2 Q. Okay. Thank you. Let me just --
3 Dr. Whittle, Medicaid is a program for
4 the indigent; is that correct?

5 A. As far as -- I don't know exactly how
6 it's defined, but basically yes.

7 Q. That is your understanding?

8 A. Uh-huh.

9 Q. Would another word for indigent or
10 another term be low socioeconomic status?

11 A. I would presume so.

12 Q. Okay.

13 Are the heart disease risk profiles --
14 are the heart disease risk factors of lower
15 socioeconomic status individuals the same as those
16 of individuals in the highest socioeconomic strata?

17 MR. MIKHAIL: Before you answer, I
18 would like to object. I'm not going to
19 interfere, but you have asked a lot of
20 questions over and over and over again. I'm
21 going to be quiet and let you go ahead and
22 ask that and let him answer it.

23 I really wish we would avoid asking
24 similar questions over and over again. We've
25 done that several times today.

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1 With that objection, you may proceed.
 2 BY MR. ANDRADE:
 3 Q. Would you like for me to repeat the
 4 question?
 5 A. Please.
 6 Q. Are the heart disease risk factor
 7 profiles of low socioeconomic status groups the same
 8 as those of higher socioeconomic status groups?
 9 A. Do you mean such as the percentage that
 10 smoke, the percentage with hypertension? Is that
 11 what you are referring to by profiles?
 12 Q. Yes. The heart disease risk factor
 13 profiles.
 14 A. I would suspect there may be. There
 15 may be some difference. Whether or not that is
 16 statistically significant or not, I don't know.
 17 Q. Could you tell me what differences
 18 there are between those two groups with respect to
 19 heart disease risk factor profiles?
 20 A. I think with regard to an individual
 21 patient, there would be little difference as far as
 22 if a risk factor was present. I mean, if it's going
 23 to be present, it's going to be a factor in either
 24 group. But whether or not there may be a different
 25 percentage, say, who are hypertensive or a different

1 percentage who smoke, that may be different. And
 2 that, I don't know.
 3 Q. Okay. Are you familiar with the
 4 scientific and medical literature reporting that a
 5 number of heart disease risk factors cluster, tend
 6 to cluster, among low socioeconomic status groups?
 7 A. I'm not familiar with that data.
 8 Q. Is it your clinical experience that
 9 that might be the case?
 10 A. I really don't know.
 11 Q. May I ask, do you know if lower levels
 12 of education are associated with increases in
 13 hypertension and high cholesterol?
 14 A. It would not surprise me, but I don't
 15 know that for a fact.
 16 Q. In your opinion, would the clustering
 17 of heart disease risk factors among low
 18 socioeconomic status groups make it difficult to
 19 interpret data on a single risk factor such as
 20 cigarette smoking?
 21 A. Again, I don't know that data to know
 22 if there is really a statistically significant
 23 difference among the different risk factors, so I
 24 really -- I would have to look at the information.
 25 Q. Okay.

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1 You have no knowledge at this point to
 2 disagree with the notion that some of these heart
 3 disease risk factors might cluster among lower
 4 socioeconomic status groups?
 5 A. I can neither agree nor disagree.
 6 Q. You just -- you just have no knowledge?
 7 A. That's correct.
 8 Q. Do you know if people in lower
 9 socioeconomic groups have different diets than
 10 people in high socioeconomic status groups?
 11 A. I would think that's certainly a
 12 possibility.
 13 Q. Do you know if they drink more alcohol?
 14 A. I cannot address that. I don't know.
 15 Q. You just have no knowledge on that?
 16 A. No, I don't.
 17 Q. Do you know if they exercise less as a
 18 group, the lower socioeconomic status people
 19 compared to higher socioeconomic status?
 20 A. I don't know that.
 21 Q. Is it fair to say as you sit here
 22 today, Dr. Whittle, that you just aren't familiar
 23 with any differences that might exist in heart
 24 disease risk factors between lower socioeconomic
 25 status groups and higher socioeconomic status

1 groups?
 2 MR. MIKHAIL: I object to the form. I
 3 don't think that's what he said.
 4 MR. ANDRADE: Let me rephrase the
 5 question. I might be able to save us some
 6 time.
 7 BY MR. ANDRADE:
 8 Q. Can you identify any heart disease risk
 9 factors that differ among low socioeconomic status
 10 groups as compared to high socioeconomic status
 11 groups?
 12 A. Are you talking about -- I need to
 13 clarify your question a little bit.
 14 Are you saying are there some risk
 15 factors that are present in one group that are not
 16 in another? Or are you saying there's a difference
 17 in the relative numbers of risk factors in the
 18 various groups?
 19 The question almost implied that some
 20 risk factors were effective in lower socioeconomic
 21 groups but not in other groups.
 22 Q. That's certainly -- well, it's actually
 23 both questions.
 24 Are you aware of risk factors for
 25 cardiovascular disease that tend to cluster in low

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1 socioeconomic status groups in terms of frequency
2 compared to higher socioeconomic status groups?

3 MR. MIKHAIL: Objection. Asked and
4 answered. We went over this area this
5 morning.

6 BY MR. ANDRADE:

7 Q. You can answer, Doctor.

8 A. Again, as we said just a few minutes
9 ago when you asked the same question, and that is
10 that I'm really not aware of that data.

11 MR. MIKHAIL: I'm not going to do it
12 now, Tony, but there's going to come a point
13 where I'm going to instruct him not to answer
14 if we repeat the same areas on the grounds --

15 MR. ANDRADE: Well, I think these --

16 MR. MIKHAIL: -- that it's
17 oppressive --

18 MR. ANDRADE: -- questions are --

19 MR. MIKHAIL: -- and annoying to the
20 witness to have to be repeating the same --

21 MR. ANDRADE: I think the record will
22 show that these might be in a subject area
23 that's similar but they are indeed different
24 questions.

25 The questions I'm now asking are with

1 respect to differences in risk factors
2 between different socioeconomic groups, and
3 that's not the same as asking if certain risk
4 factors exist.

5 MR. MIKHAIL: I'm going to work hard to
6 detect those distinctions in order to be
7 fair. But if I think at some point that we
8 are being repetitive, I'm going to instruct
9 him not to answer.

10 (Thereupon, the document was marked
11 Defendant Lorillard's Exb. No. 13 for
12 Identification.)

13 BY MR. ANDRADE:

14 Q. I've handed you what's been marked as
15 Defendant's Exhibit No. 13, Dr. Whittle. Are you
16 familiar with the World Health Organization's
17 Technical Report Series No. 841, "Cardiovascular
18 Disease Risk Factors: New Areas of Research"?

19 A. No, sir, I'm not.

20 Q. Could I ask you to direct your
21 attention to page 40, please.

22 A. Okay.

23 Q. The section 11.3.2 entitled, "Health
24 Related Behaviors." I'd like to read it to you and
25 ask you if you agree with it.

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1 "Health related behaviors may be
2 important in generating social and
3 ethnic differences in health. Numerous
4 studies have shown social class
5 differences in smoking, diet, alcohol
6 intake, physical activity and obesity.
7 These need to be studied wherever
8 socioeconomic and ethnic differences in
9 CVD occur.

10 "The extent --" Excuse me. "To
11 the extent that differences in
12 Behaviors do account for social
13 gradients in health, this raises a new
14 set of questions, one step further back
15 in the causal chain. What causes the
16 social gradient in behavior? An
17 analysis of the health risks of smoking
18 will be flawed if it fails to take into
19 account a low social status which in
20 turn is associated with ill health for
21 reasons other than smoking."

22 Would you agree with that statement?

23 A. The -- I don't know whether I agree or
24 not. And let me just make a point, if I could, in
25 reference to that. I'm not an epidemiologist. And

1 what I am looking at is, a risk factor is a risk
2 factor, regardless of whether you are in a higher or
3 a lower socioeconomic status.

4 If you are a smoker or if you are a
5 diabetic or if you are hypertensive, it's still a
6 risk factor in either group, and this is really
7 beyond my expertise to be able to comment whether I
8 think this is true or not.

9 Q. Maybe I can truncate the question by
10 asking, Doctor, in your opinion you are not an
11 expert in what risk factors might cluster in lower
12 socioeconomic status groups as opposed to higher
13 socioeconomic status groups; is that correct?

14 MR. MIKHAIL: You may answer but I'm
15 going to object as to the form as to whether
16 there even is such an area of expertise.

17 BY MR. ANDRADE:

18 Q. Do you consider yourself an expert in
19 that area?

20 A. No.

21 Q. And as we sit here today you also can't
22 offer any opinion as to the differences in the
23 magnitude of risk factors for cardiovascular disease
24 in lower socioeconomic groups compared to higher
25 socioeconomic groups?

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1 A. That's correct.
 2 MR. MIKHAIL: The court reporter looks
 3 like she's ready for a break.
 4 MR. ANDRADE: Let me ask --
 5 MR. MIKHAIL: You want to take five
 6 minutes?
 7 MR. ANDRADE: Would you like to take a
 8 short break?
 9 THE WITNESS: Yeah.
 10 (Thereupon, a recess was taken.)
 11 BY MR. ANDRADE:
 12 Q. Dr. Whittle, if a patient has multiple
 13 risk factors in his background for, say, coronary
 14 heart disease, is there any way with scientific
 15 certainty to identify what the cause was of their
 16 diseased hearts, assuming they had coronary heart
 17 disease, a heart attack, using that as an example?
 18 If one has multiple risk factors in his background,
 19 is there any way of determining with scientific
 20 certainty what caused that person's heart attack?
 21 A. No, there would not.
 22 Q. Do nonsmokers develop coronary heart
 23 disease?
 24 A. They may.
 25 Q. And nonsmokers develop the other types

1 of cardiovascular disease, is that true?
 2 A. That nonsmokers may develop other types
 3 of --
 4 Q. Other types of cardiovascular disease?
 5 A. Yes, they may.
 6 Q. You have seen in your practice, say,
 7 nonsmokers who have, say, peripheral vascular
 8 disease?
 9 A. Yes.
 10 Q. Do you know what proportion of coronary
 11 heart disease is caused solely by smoking?
 12 A. No, I don't.
 13 Q. Do you know what percentage of
 14 peripheral vascular disease would be caused solely
 15 by smoking?
 16 A. No, I don't.
 17 Q. And the same question for cerebral
 18 vascular disease and stroke, would you know what
 19 percentage would be caused solely by smoking?
 20 A. No, I don't.
 21 Q. If a person stops smoking, does their
 22 risk for coronary heart disease decline?
 23 A. In my clinical experience, I've seen a
 24 number of patients who have stopped smoking but have
 25 subsequently had heart attacks.

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1 As far as the percentage or how much it
 2 drops or depending on how much they smoked, I cannot
 3 answer. But I've seen a lot of patients who had
 4 smoked for a number of years but then stopped and
 5 who still went on and had heart attacks.
 6 Q. All right. Would you attribute the
 7 later heart attack to their smoking in those cases?
 8 A. If they have been a long-time smoker
 9 and they've got more coronary disease, yes, then
 10 that may then predispose them to a heart attack.
 11 Q. Is there any period of having quit
 12 smoking that, in your opinion, would put a former
 13 smoker no longer at risk for the development of
 14 coronary heart disease?
 15 A. That I cannot answer.
 16 Q. Are you familiar at all with the
 17 literature on smoking cessation and risk for
 18 coronary heart disease?
 19 A. No, I'm not.
 20 Q. So you couldn't quantify, even on the
 21 basis -- well, let me ask you this question: Could
 22 you quantify on the basis of your clinical
 23 experiences how much reduced a smoker's risk is if
 24 they quit, say, four or five years?
 25 A. I can't -- I can't answer that. I'm

1 not able to.
 2 Q. Okay. Could you answer that for any
 3 time, Doctor, even ten years?
 4 A. I've not looked at the information that
 5 I have nor do I have it available to look and I
 6 cannot answer that.
 7 Q. All right. If -- does a smoker's risk
 8 also decrease for peripheral vascular disease if
 9 they stop smoking?
 10 A. For certain types of peripheral
 11 vascular disease, yes.
 12 Q. And what types would they be?
 13 A. Such as Buerger's disease.
 14 Q. Are there types of peripheral vascular
 15 disease where if a person stops smoking their risk
 16 does not decrease?
 17 A. I cannot answer that.
 18 Q. You have not made a study of your
 19 patient population on this particular issue?
 20 A. That's correct.
 21 Q. And can you give me an answer based on
 22 your clinical experiences?
 23 A. Not really.
 24 Q. How long would a Buerger's dis -- Let
 25 me rephrase the question.

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1 If a smoker stopped smoking at a
2 particular point in time, how quickly does their
3 risk for Buerger's disease decrease?
4 A. I cannot answer that. The incidence of
5 Buerger's disease is quite low and I've seen very,
6 very few cases in a number of years, so my clinical
7 experience with Buerger's disease is extremely
8 limited.
9 Q. Is it an extremely rare disease,
10 Buerger's disease?
11 A. It has -- again, I've seen very few
12 cases.
13 Q. Do you know, in the general population,
14 what the incidence would be, one case out of how
15 many thousand population?
16 A. No, I don't.
17 Q. Do you know what that would be, Dr.
18 Whittle, for the population of smokers?
19 A. No.
20 Q. So it would still be a rare disease
21 even among those who smoke?
22 A. True Buerger's disease, yes.
23 Q. Okay. Can you tell me how many cases
24 you have seen in your career?
25 A. Probably not more than three or four.

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1 Q. Do you know if the risk for developing
2 atherosclerosis decreases when one stops smoking?
3 A. I am not familiar with that data enough
4 to really be able to comment.
5 Q. Could you offer an opinion based upon
6 your clinical experiences?
7 A. All I can say is that I have -- I have
8 seen a number of patients who were former smokers
9 even for a number of years who have still had heart
10 attacks. But as far as the numbers or percentages,
11 I can't answer that.
12 Q. Okay. In your opinion, does smoking
13 cessation decrease the development of
14 atherosclerosis?
15 A. I can't say that.
16 Q. You don't know? Are there any --
17 A. I --
18 Q. Excuse me. I'll let you finish your
19 answer.
20 A. I can't say that because once the
21 groundwork has been laid for the development of
22 eventually a heart attack with more plaque being
23 built up, then with that substrate being there, then
24 you may go ahead and progress to a heart attack.
25 But what the cessation -- what role that would have,

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1 I can't really address.
2 Q. So you can't offer an opinion as to
3 whether or not smoking cessation would improve one's
4 outlook in terms of the development of
5 atherosclerosis?
6 A. Again, I've seen people who have
7 stopped smoking who still progressed on to have
8 heart attacks. But whether or not there is a point
9 after which you have stopped that that would be
10 significant, I cannot answer.
11 Q. Doctor, I'm not asking about the heart
12 attack, you know, as the final manifestation. I was
13 really asking about the development of
14 atherosclerosis -- if I can use lay terms -- just
15 the general process of building up plaque inside the
16 arteries and narrowing the opening of the artery.
17 So not necessarily heart disease as an end point.
18 Do you -- do you have any opinion based
19 upon your clinical experience whether or not if you
20 stopped smoking cigarettes, okay, your prognosis is
21 much better in terms of not continuing to develop
22 atherosclerotic changes?
23 A. I know data that if you have a problem
24 and you stop, there may be a decreased incidence.
25 But as far as if you stop before there is a problem

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1 and then there's a decrease in incidence, that's
2 information I do not have.
3 Q. Okay. Is that because it's not
4 ascertainable since it's difficult to determine the
5 degree of atherosclerosis at any point in time in a
6 person who hasn't had a heart attack?
7 A. I think it would be extremely difficult
8 because you have also still got the problem with
9 people that have silent coronary disease, so you
10 don't know whether they've got a problem or not. So
11 that data, I think, would be almost impossible to
12 obtain.
13 Q. Is atherosclerosis a condition that one
14 observes in children?
15 A. Under very rare circumstances, yes.
16 Q. Is it thought -- when is it thought to
17 develop in life as a process? At what age would you
18 begin to see the first signs of atherosclerosis?
19 A. You can see some change at a relatively
20 young age, but the problems that may lead to the
21 development of atherosclerosis in children -- there
22 are some very specific things like a progeria, some
23 of the isolated type 2 hyperlipid proteinemias, and
24 things of that nature.
25 Q. And this would be in very young

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1 children? Would you define "children" by giving me
2 an age range or an age marker?

3 A. I think in progeria you could probably
4 see children probably in the range of ten or eleven.
5 If you are talking about the type 2 hyperlipid
6 proteinemia, you are probably talking about, I would
7 guess, probably mid to late teens on rare
8 circumstances. Also in the cases, also, some even
9 more rare anomalies like homocystinuria. You may
10 see some changes there. Again, though, those are
11 extremely rare.

12 Q. Can you have atherosclerosis develop in
13 children?

14 A. I would think that would be extremely
15 rare.

16 Q. Have you ever seen it in any of your
17 patients?

18 A. Again, I don't deal with the pediatric
19 population.

20 Q. What would be the age cut off? I'm not
21 sure how pediatrics is defined in age range.

22 A. I really don't see -- I rarely ever see
23 anyone less than 16 years of age.

24 Q. Okay. I think you mentioned that you
25 could have a heart attack without or you said silent

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1 heart disease. Could you explain silent heart
2 disease for me?

3 A. Silent heart disease is someone, for
4 example, with a heart attack -- who has had a heart
5 attack who has never had any clinical
6 manifestations; that is, they have never had chest
7 discomfort, they have never had shortness of breath,
8 but they go in, routine electrocardiogram, they show
9 evidence of prior heart attack.

10 Q. Is it possible to have a heart attack
11 without atherosclerosis?

12 A. That would -- you can, but that would
13 be extremely rare. It would have to be either on a
14 traumatic basis or on an embolic basis, and those
15 things would be exceptionally rare.

16 Q. Can you have coronary arteries that are
17 occluded without having a heart attack?

18 A. Yes.

19 Q. Can you have arteries in the more
20 peripheral locations and have disease of the
21 extremities without having the arteries and the
22 peripheries occluded?

23 If I can restate the question, that was
24 terribly confusing.

25 Can you have peripheral vascular

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1 disease without peripheral blood vessels being
2 occluded?

3 A. Peripheral vascular disease does
4 mean -- peripheral vascular does mean peripheral
5 vessels are occluded.

6 Q. Could you have a vasospasm in a
7 peripheral blood vessel that isn't occluded through
8 atherosclerosis? Could that lead to a diagnosable
9 disease?

10 A. Yes. But that's extremely rare.

11 Q. But it can happen?

12 A. Extremely rarely.

13 Q. Doctor, in your opinion is hypertension
14 the number one risk factor for stroke?

15 A. Again, you would have to separate out
16 whether you are talking about hemorrhagic stroke or
17 thrombotic stroke. In hemorrhagic stroke, it would
18 be a very strong risk factor; in thrombotic stroke
19 it would not be.

20 Q. Is hemorrhagic stroke associated with
21 cigarette smoking?

22 A. To my knowledge, yes.

23 Q. Could you cite any study to support
24 that opinion?

25 A. No, I cannot.

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1 Q. Is this based on your clinical
2 experiences?

3 A. Clinical experience, some textbooks in
4 the past. But again, I cannot specifically tell you
5 where.

6 Q. All right. Have you seen hemorrhagic
7 stroke in patients who don't smoke?

8 A. Yes.

9 Q. Is it more common in patients who don't
10 smoke?

11 A. I can't say that.

12 Q. You have no --

13 A. Again, I have not --

14 Q. You've not done a study?

15 A. I've not looked at our data in any
16 routine fashion.

17 Q. Can I ask you, do you keep any data in
18 an organized fashion with respect to smoking and
19 cardiovascular disease based upon your patient
20 population in your private practice?

21 A. No, sir, because there is no reason for
22 me to.

23 Q. You have never done any kind of formal
24 study?

25 A. No, sir. I'm in practice; not in an

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1 academic setting.

2 Q. All right. So in your observations, I
3 think as you have made clear, are then basically --
4 your clinical -- you compile those experiences to
5 offer your opinions; is that correct?

6 A. That's correct.

7 Q. All right.

8 The second type of stroke, I believe
9 you mentioned, is thrombotic?

10 A. Yes.

11 Q. And do you see thrombotic stroke occur
12 in nonsmokers?

13 A. Yes.

14 Q. Doctor, what criteria would you use in
15 evaluating a patient who had multiple risk factors
16 for coronary heart disease in determining what the
17 cause was of their coronary heart disease?

18 A. Could you restate that, please?

19 Q. Yes. Perhaps it might be clearer if I
20 used an example.

21 You have a hypothetical patient, and
22 say the hypothetical patient has five risk factors
23 for coronary heart disease: They're a smoker, they
24 have a family history, they have hypertension, they
25 have high cholesterol, and they have diabetes.

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1 What criteria would you use to evaluate
2 what the cause was of the coronary heart disease in
3 that particular patient?

4 MR. MIKHAIL: I want to object as to
5 the form in that you are restating what the
6 major factors that Dr. Whittle stated earlier
7 because I don't believe they included family
8 history as one of the ones that he included.
9 But since it's a hypothetical question,
10 that's fine.

11 MR. ANDRADE: Just to try to address
12 the objection, I'm not suggesting that these
13 are your factors. It's purely hypothetical.

14 BY MR. ANDRADE:

15 Q. I'm saying a patient comes to you and
16 they have those five risk factors. They have high
17 blood pressure, high cholesterol, they have a family
18 history, they smoke, and they have diabetes. And
19 you evaluate that patient and they have coronary
20 heart disease, say they've had a heart attack.

21 What criteria would you use to try to
22 determine what the biological cause was of the heart
23 attack in that patient?

24 A. I would use no criteria.

25 Q. You would use no criteria whatsoever?

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1 A. Exactly. And the reason I say that is
2 the following: If a person has had a heart attack,
3 we need to modify every risk factor that we can to
4 prevent a second heart attack. So I'm not going to
5 tell a person who was a smoker, quit smoking but
6 let's not control your diabetes. Or let's control
7 your diabetes but you continue to smoke because we
8 have to modify all risk factors that we can.

9 Q. Okay, but that really wasn't the
10 question, Doctor.

11 I understand what you are saying, that
12 for prognostic purposes for future risk you would
13 advise that patient to reduce all those risk factors
14 that they could, correct?

15 A. That's correct.

16 Q. But with respect to the first heart
17 attack, what criteria would you use in determining
18 what caused that first heart attack?

19 A. I can't.

20 Q. And why is that?

21 A. Because if you have multiple risk
22 factors, I cannot tell you did one risk factor
23 aggravate another? Or are they all working in
24 combination? Did one do it and not the others? And
25 I can't separate that out.

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1 Q. Is there no test or procedure you could
2 perform to get the answers to that question, to
3 determine what the cause was of the heart attack?

4 A. No.

5 Q. Is there any kind of chemical analysis
6 you could perform on the diseased heart to try to
7 answer what caused it specifically?

8 A. No.

9 Q. So there would be no marker in the
10 heart tissue that would tell you if it was diabetes
11 or if it was high cholesterol or that it was smoking
12 specifically that caused that?

13 A. No.

14 Q. Is it fair to say that medical science
15 simply doesn't have those kinds of tests available
16 to make those determinations?

17 A. That's correct.

18 Q. If we had --

19 A. That's in the case of multiple risk
20 factors.

21 Q. Sure.

22 If we had a patient who came to you and
23 also had multiple risk factors for peripheral
24 vascular disease, what criteria would you use in
25 trying to determine which of those risk factors

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1 caused the peripheral vascular disease in that
2 patient?

3 A. Again, I can't tell you which ones
4 specifically did in the multiple risk factor.
5 That's impossible.

6 Q. Is it for the same reason? Is there
7 any kind of diagnostic test or laboratory test or
8 procedure that would allow you to ascertain the
9 cause of the peripheral vascular disease in that
10 case?

11 A. Not in that specific case, no.

12 Q. Could you obtain the material that
13 caused the atherosclerosis in the peripheral vessel
14 and do any kind of analysis on that that would help
15 identify the cause?

16 A. No.

17 Q. Is there any kind of gross observation
18 that a pathologist could make on the diseased artery
19 in the periphery -- excuse me -- the diseased blood
20 vessel in the periphery, and could the pathologist,
21 by some type of gross or microscopic evaluation,
22 tell us what risk factor caused the disease in the
23 peripheral vascular case?

24 A. You can't do that because
25 atherosclerosis is the end product. And how you got

1 there, you cannot ascertain.

2 Q. Atherosclerosis is a nonspecific,
3 not-tied-to-one-risk-factor type process?

4 A. It may be tied to one risk factor if no
5 other risk factors are present.

6 Q. But in a person --

7 A. In a case of multiple risk factors,
8 that's difficult. Did one accelerate, did smoking
9 accelerate the effect of hypercholesterolemia? Did
10 smoking accelerate the effect of the hypertension?
11 You can't say.

12 Q. All right. And you couldn't tell, on
13 the other hand, if smoking played no role, I
14 suppose, if there's no test that would give you a
15 marker for smoking or a marker for cholesterol or a
16 marker for high blood pressure?

17 A. We can't prove it one way or the other.

18 Q. There's just no scientific, medical or
19 diagnostic test that you know of that could give us
20 the answer to that question?

21 A. There is no pathologic change that
22 would be specific for one particular risk factor
23 over another because, again, we're looking at the
24 end product.

25 Q. Okay. And that would be true -- I'm

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1 trying to think of the categories that you talked
2 about this morning. Coronary heart disease was one,
3 peripheral vascular disease was the other, and then
4 we used cardiovascular disease as a general term,
5 but --

6 MR. MIKHAIL: Cerebrovascular disease.

7 MR. ANDRADE: Thank you.

8 BY MR. ANDRADE:

9 Q. Cerebrovascular disease, the same
10 question. Is there any way if we have a cerebral
11 vascular accident, if one can take the material from
12 the brain and identify through any kind of
13 biological test, laboratory test, what the cause was
14 of that?

15 A. I wish it was that simple.

16 Q. And is it for the same reason, is that
17 secondary to atherosclerotic build up in the
18 arteries that lead to the brain?

19 A. In the case of a thrombotic or embolic
20 stroke, yes; not in the case of hemorrhagic stroke.

21 Q. That's right. You distinguished from
22 the two. But in either case is there any, I guess,
23 laboratory test or diagnostic test that can be
24 performed when you have a patient with multiple risk
25 factors to identify which risk factor, if any,

1 caused the atherosclerotic build up?

2 A. Not in the case of multiple risk
3 factors.

4 Q. Okay. And therefore we also couldn't
5 look at the thrombus or hemorrhaging of the brain
6 and determine what specifically caused it
7 biologically?

8 A. You can't do that.

9 Q. Is there any way a pathologist could
10 microscopically look at the arteries leading to the
11 brain and be able to give his medical opinion as to
12 what caused -- in the presence of multiple risk
13 factors -- what caused the atherosclerosis?

14 A. That would be impossible.

15 Q. Is there anything he could do to
16 section the tissue, to section the diseased arteries
17 leading to the brain and come up with a microscopic
18 analysis of what caused that build up?

19 A. No. Again, because you are looking at
20 the end point, so you can't differentiate in
21 multiple risk factors.

22 Q. Could a pathologist, if he had a heart
23 from a patient who suffered a heart attack -- and
24 again, this patient having multiple risk factors --
25 could a pathologist take tissue sections from that

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1 heart and look at them under the microscope and tell
2 us what was responsible for the heart attack, what
3 risk factor?

4 A. No.

5 Q. If we had a patient with peripheral
6 vascular disease and do those diseases sometimes
7 require removal of tissue or amputation?

8 A. Yes.

9 Q. Okay.

10 If we had that surgical specimen, could
11 a pathologist do some sections on the diseased
12 extremity that had to be removed and put under the
13 microscope and diagnose what the cause was of that
14 disease?

15 A. No.

16 Q. Radiologically is there any way of
17 making that determination in terms of causation of
18 peripheral vascular disease?

19 A. No. Again, because you are looking at
20 the final stage of atherosclerosis and you really
21 can't differentiate at that time.

22 Q. So the radiological techniques would
23 just tell you that you have the precursor, say the
24 atherosclerotic build up, but it couldn't tell you
25 what caused it?

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1 A. That's correct.

2 Q. Okay.

3 Now, I wanted to ask you a few
4 questions about self-reporting. Not in the context
5 of cigarette smoking or diet which we did touch on
6 earlier, but just more general questions.

7 If a doctor comes to you -- if a
8 patient comes to you -- I'm sure you have patients
9 who are physicians as well -- but if a patient comes
10 to you and they say to you, "Doctor--" and it's the
11 first visit. "--I have angina," would you accept
12 the self-reporting or would you ask the patient some
13 questions to determine if they're correct in giving
14 you what they believe to be their medical history?

15 A. I would certainly ask that and confirm
16 it.

17 Q. Would you confirm it by asking
18 questions about where the pain is or how frequent
19 the pain is? What kinds of information would you
20 ask of me?

21 A. I would ask, Is it exercise induced?
22 How long does it last? Is it associated with
23 shortness of breath? How long does it last?
24 Questions of this nature to help me differentiate
25 which it is.

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1 Q. Okay.

2 In your opinion or -- excuse me -- in
3 your experience have you had patients who would come
4 in and, as a lay person, tell you that they believe
5 they had a certain condition, but upon probing by
6 you and gathering of information by you, you
7 determined that the diagnosis was not correct?

8 A. Yes.

9 Q. All right.

10 If I came in to you, moved here from,
11 say, some other state and said, "Doctor, I had a
12 heart attack five years ago," would you accept that
13 self-reporting or would you ask me some questions to
14 try to determine if I really did have a heart attack
15 five years ago?

16 A. I would try and ascertain whether or
17 not you, in fact, did.

18 Q. And would you ask me to provide medical
19 records from my previous treating cardiologist?

20 A. Yes, I would, if that were appropriate.

21 Q. Do you do that on occasion?

22 A. Yes.

23 Q. Would you also do that for peripheral
24 vascular disease, cerebrovascular disease? If
25 people claim to have those conditions in the past,

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1 would you ask them if they could provide medical
2 records?

3 A. Yes, I would.

4 Q. And what kinds of questions would you
5 ask me about my heart attack if I came to you and
6 said, Doctor -- it's my first visit. I had a heart
7 attack five years ago now I'm having some pain in my
8 chest and I'm worried? What would you ask me to try
9 to determine if my self-reporting was correct?

10 A. Is self-reporting about the pain or
11 about the heart attack?

12 Q. About both. About the heart attack,
13 about the heart attack.

14 A. I think about the heart attack I would
15 want to know how long you were in the hospital, did
16 you have an angiogram, did they tell you how much
17 damage there was, was an echo done that showed any
18 damage, and things of that nature.

19 Q. All right. If I'm not terribly
20 sophisticated and I can't remember the names of the
21 tests, would you repeat some of those tests?

22 A. Only if it were necessary.

23 Q. That would depend on a case-by-case
24 basis?

25 A. Exactly.

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1 Q. All right. But if you suspected some
2 of my information -- if I would tell you to the best
3 of my ability in all honesty what I recall, there
4 might be cases where you would still repeat certain
5 tests?

6 A. Yes.

7 Q. Is that because you had found, in your
8 clinical experience, that often lay people do not
9 accurately report what they think they had in the
10 way of diseases or conditions in the past?

11 A. I think it's not unusual, particularly
12 when you are dealing with the heart. Some people
13 may say, Well, I've had 15 heart attacks and that's
14 just not going to happen. And so in that situation
15 what you may actually find is the patient may have
16 been admitted 15 times but there was no damage. So
17 you just have to go to a further end to substantiate
18 whether or not it was really true or not.

19 Q. If the patient comes who has had 15
20 heart attacks, you would probably tell him he was
21 pretty lucky?

22 A. I guess. I would check it out, first.

23 Q. Yeah.

24 Do you often find, in your clinical
25 experience, that a patient will report not 15 but

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1 had a heart attack or some condition and when you
2 investigated actually was a different -- the
3 diagnosis was incorrect that they were
4 self-describing?

5 A. That's not uncommon for that to happen.

6 Q. It could be -- what are some of the
7 differential or what were some of the other problems
8 that they actually could have been experiencing when
9 they thought they had had a heart attack?

10 A. They could have had some esophageal
11 reflux, it could have been pericarditis,
12 musculoskeletal pain. It could have been a lot of
13 different things.

14 Q. Okay. If someone complains of poor
15 circulation to their feet or hands and they say,
16 I've been diagnosed as having peripheral vascular
17 disease, would you ask me questions to determine if
18 my self-reporting was accurate?

19 A. Yes, I would.

20 Q. And what kinds of questions would you
21 put to me?

22 A. I would ask you, Do your legs or
23 buttocks cramp when you walk? Does it stop when you
24 go away? Then I would need to substantiate that
25 with a physical examination as well.

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1 Q. Would there be any tests you might run
2 to try to get a definitive diagnosis in that case?

3 A. If a person is significantly limited
4 and the physical examination tended to support that,
5 I might do some Doppler studies of the lower
6 extremities to see if there was any decreased blood
7 flow.

8 Q. Doctor, I wanted to ask you a few
9 specific questions about your expert statement. I
10 think we had that marked early on.

11 MR. MIKHAIL: I think it was 2.

12 MR. ANDRADE: Yeah. Let me see if it's
13 on this stack.

14 BY MR. ANDRADE:

15 Q. Let me give you Defendant's Exhibit No.
16 2 which is your expert disclosure statement in this
17 case.

18 Now, in the second sentence, Doctor,
19 let me read it:

20 "Dr. Whittle is expected to
21 testify that smoking causes and
22 contributes to heart disease including
23 coronary heart disease, cardiovascular
24 disease, atherosclerotic peripheral
25 vascular disease and aortic aneurysms."

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1 Can I ask what distinction you make
2 between a cause and something that contributes to a
3 disease? I'm not asking in heart disease
4 necessarily, but just the general question: How
5 would you differentiate a cause from something that
6 contributes to a disease?

7 MR. MIKHAIL: Objection. Asked and
8 answered. We went over that this morning.

9 You can try again.

10 THE WITNESS: I would probably have
11 just left it as causes.

12 BY MR. ANDRADE:

13 Q. I believe we talked about risk factors
14 this morning. I don't think I asked you this
15 question, but that's fine.

16 You probably would eliminate the word
17 "contributes"? Is that your testimony?

18 A. I probably would.

19 Q. All right. So you would amend your
20 testimony to say, Dr. Whittle is expected to testify
21 that smoking causes heart disease, so on and so
22 forth?

23 A. (Affirmative.)

24 Q. Again, I'd like to ask you what your
25 criteria are for determining -- making a

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determination, offering an expert opinion that smoking causes coronary heart disease.

A. I think we've gone over this earlier, but basically, as I said earlier, I said in medicine I don't think we use the word "cause" very often.

I think when we are dealing more with infectious diseases, we will use the word cause. For example, the bacillus for diphtheria causes diphtheria.

But when we are dealing with coronary disease, I think we all feel very comfortable saying certain things may cause the coronary disease, but we cannot fully explain the basis on down to a molecular level. So I think that's why we probably don't use the word cause but we use the word risk factor. But we're still implying cause, but that's just trying to be reasonably scientific about that is why we probably don't use the word cause very often.

Q. Okay. Do you use the word cause because if you told your patients smoking is a risk factor for disease it might not have the same impact on them as if you looked them in the eye and said, Smoking can cause heart disease?

A. I think we tell patients that but I

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don't think that's the specific reason.

Q. I know I've asked the question before, but I'm not sure that you've responded to it. Could you explain for me, in the context of your expert opinion, how you are differentiating your use of the word cause from risk factor because I think what I'm hearing is you might use them interchangeably.

A. And that's what I said earlier.

Q. Okay. So in your opinion the way you use -- in your opinion there is no difference in the meaning of the word -- term "risk factor" and the word "cause"?

A. Yes. And that's also consistent with what I said earlier and that's why I don't like to use the terms as age and sex cause coronary disease or as a risk factor because I use the terms more interchangeably. And I can't say that age or sex causes coronary disease. And so I tend to use the terms more interchangeably and that's why I don't like to consider those necessarily as risk factors.

Q. Anything that you identify as a risk factor you would also identify as a cause; is that correct?

A. That's correct.

Q. All right.

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Could you give me the specific bases of your opinion in this case that cigarette smoking causes coronary heart disease?

A. I have to do that based upon my clinical experience.

Q. Okay.

A. In my clinical experiences over the years I have seen hundreds and hundreds and perhaps even thousands of patients who have been smokers but who are not hypercholesterolemic, who are not diabetic, who that is their only risk factor for coronary disease and who have developed very extensive coronary atherosclerosis.

Q. All right. But -- so you are saying in some of your cases you have determined cigarette smoking is a cause of disease because it is the risk factor-- Or the factor. I'll try not to use "risk factor" to avoid confusion. --is the factor that is present that in your opinion would explain the development of disease?

A. I would not use the term "some," but it would be a great number of patients on whom that is the only risk factor.

Q. Okay. Is it your testimony that cigarette smoking causes heart disease in all

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smokers?

A. No. What I'm saying is I see a large number of people who are smokers with coronary disease because, again, I'm seeing when they develop coronary disease that I see a large number of these patients, that's the only risk factors. And my feeling is that that is what is responsible for the coronary disease.

Q. In those cases do you take a thorough medical history to try to determine if there are other risk factors present in the individual's background?

A. Yes, I do.

Q. Okay. But you do have a certain number of patients where smoking is the only risk factor in their background?

A. A large number.

Q. A large number, okay. And you have not been able to identify literally, in those cases, any other risk factors in their background for coronary heart disease?

A. That's correct.

Q. Can you give me a percentage of your patients who have heart disease where, you know, smoking is the only risk factor in the background?

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1 A. First of all, you have to say coronary
2 heart disease. It's not heart disease.
3 Q. Excuse me. Coronary heart disease.
4 Let's stick with coronary heart disease.
5 A. I have not looked at that data and it
6 would purely be a guess.
7 Q. Could you give me an estimate? Your
8 testimony is based on your clinical experience so it
9 is difficult for me to get an appreciation for how
10 common an experience this is unless you make an
11 attempt to estimate it for me.
12 A. I would guess -- and again, purely
13 accept it as that, that smoking is present in the
14 people with coronary disease probably in excess of
15 90 percent of the time. As that being the only risk
16 factor, I would guess in the range of 40 to 50
17 percent of the time.
18 Q. All right.
19 Would you agree, Dr. Whittle, that your
20 patient population here in this area wouldn't
21 necessarily be representative of the patient
22 populations that other physicians have in the other
23 parts of the State of Florida?
24 MR. MIKHAIL: I object to the form.
25 MR. ANDRADE: Let me rephrase that,

1 please.
2 BY MR. ANDRADE:
3 Q. Is your patient population in your
4 group private practice representative of the patient
5 populations of other cardiologists in the State of
6 Florida?
7 A. I believe it is.
8 Q. And you would say that even though you
9 are fortunate to live in a relatively affluent area
10 of Florida?
11 A. Yes. I've talked with other
12 cardiologists in linking our data with -- or our
13 assessments with other patients or with other
14 practices, and the -- the results and the feelings
15 are almost identical to other people. So I don't
16 think we have a skewed population at all.
17 Q. Have you done any -- any studies on
18 your population comparing them to the patient
19 populations of other cardiologists in the State of
20 Florida?
21 A. No, because there is no reason to.
22 Q. Is this area a favorite retirement
23 community? Is it -- do you have a lot of retirees
24 in this area?
25 A. Yes.

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1 Q. Okay. Do you think that other
2 cardiologists throughout the State of Florida would
3 have a similar proportion of retirees in their
4 patient populations?
5 A. Probably depends on the section.
6 Probably maybe a little bit less so in northern
7 Florida.
8 Q. And I think, though, you did testify
9 that, again, this area enjoys a high standard of
10 living, has a lot of affluent individuals, and so
11 you have a significant percentage of affluent
12 individuals in your particular practice?
13 A. Yes.
14 Q. Do you think that other cardiologists
15 in the State of Florida would have the same
16 percentage of affluent individuals in their
17 practices?
18 A. I've never looked at that. I think
19 our -- our impression is that clinically we're
20 seeing the same thing. But as far as the
21 socioeconomic that's -- I don't know that we have
22 ever really even discussed that.
23 Q. All right. So there might be some
24 differences between the demographics of your
25 particular practice and the demographics of the

1 practices of other cardiologists in the State of
2 Florida?
3 A. For the demographics in the patients,
4 yeah. But I think as far as the disease process,
5 no.
6 Q. Okay. Now, I'm not asking about, you
7 know, whether you would see the same percentage of
8 heart attacks or strokes, say, as other
9 cardiologists. But the demographics of your
10 patients, if you would have a different patient mix,
11 if you will, than other cardiologists in other parts
12 of Florida?
13 A. I don't think we would because, again,
14 we're seeing these patients once they come in with a
15 problem. And that's going to be fairly universal.
16 Q. So you think that your particular
17 patient population is representative of the patient
18 populations of other cardiologists in the State of
19 Florida?
20 A. I think by and large, with some
21 exceptions.
22 Q. Okay. I wanted to ask you again about
23 your opinion that cigarette smoking causes -- and
24 then the next item you have is cardiovascular
25 disease in your report.

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1 A. Yep.
 2 Q. But I think we agreed earlier that
 3 cardiovascular disease is a broader term.
 4 A. That's correct.
 5 Q. So you are not saying that
 6 cardiovascular disease is a separate clinical entity
 7 but it's more of an umbrella term that would
 8 encompass coronary heart disease, atherosclerotic
 9 peripheral vascular disease and aortic aneurysms; is
 10 that fair?
 11 A. That's correct.
 12 Q. I didn't want to waste time on that if
 13 we could agree --
 14 A. We've beaten that enough.
 15 Q. -- that it wasn't a separate disease
 16 entity.
 17 Okay, then let me ask the question:
 18 What is the -- it is your opinion that cigarette
 19 smoking causes atherosclerotic peripheral vascular
 20 disease; is that correct?
 21 A. That's correct.
 22 Q. Could you tell me the bases for that
 23 opinion? I would like to have all the specific
 24 bases of your opinion.
 25 A. I think, again, based upon my clinical

1 experience -- I think I can probably only recall
 2 very few patients who have developed significant
 3 peripheral vascular disease who did not smoke.
 4 Extremely few. I don't think I've ever seen a
 5 person with an aortic aneurysm who did not smoke.
 6 Q. All right. I would take it that you
 7 took thorough medical histories on those individuals
 8 to try to ascertain any other risk factors in their
 9 backgrounds for peripheral vascular disease; would
 10 that be correct?
 11 A. We do the same thorough examination and
 12 questioning on everybody.
 13 Q. Is -- in your experience have you found
 14 that there is a certain percentage of people in your
 15 practice and your experience that have
 16 atherosclerotic peripheral vascular disease where
 17 smoking is the only identifiable risk factor in
 18 their background?
 19 A. I would say probably more so in
 20 peripheral vascular disease than in coronary heart
 21 disease.
 22 Q. Could you give me, again, an estimate,
 23 a percentage estimate?
 24 A. Again, I think as an example with
 25 aortic aneurysms, I don't think I've seen anyone

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1 that did not smoke. As far as if what you are
 2 getting at, those people who smoked only, I would
 3 think if we're seeing maybe 40 to 50 percent of
 4 people with coronary disease in whom that was their
 5 only risk factor, my guess -- and again it's only
 6 that -- that in peripheral vascular disease I bet
 7 we're looking more at 80 -- probably 70 to 80
 8 percent.
 9 Q. Okay. Again, trying to take them one
 10 entity at a time, that way we'll be able to do it
 11 more orderly, so for atherosclerotic peripheral
 12 vascular disease patients, patients that you have
 13 with that problem, peripheral vascular disease,
 14 approximately what percentage would have smoking as
 15 the sole risk factor in their background?
 16 A. I would -- I would guess easily 70 to
 17 80 percent.
 18 Q. 70 to 80 percent, okay. But you do, on
 19 occasion, have patients with atherosclerotic
 20 peripheral vascular disease that don't have smoking
 21 in their backgrounds?
 22 A. It would be rarer than hen's teeth.
 23 Q. In your experience virtually every
 24 patient with peripheral vascular disease is a
 25 smoker?

1 A. Not everybody, but almost.
 2 Q. Virtually. No, I said virtually all.
 3 A. Virtually all.
 4 Q. Could you put a percentage on that for
 5 me, please?
 6 A. I would say certainly in excess of 95
 7 percent.
 8 Q. And 70 to 80 percent of those, just so
 9 I understand, would have cigarette smoking as the
 10 sole risk factor in their background for
 11 atherosclerotic peripheral vascular disease?
 12 A. That's correct.
 13 Q. Okay. And finally, aortic aneurysms?
 14 A. Aortic aneurysms are a little bit
 15 different from our clinical experience primarily
 16 because we see very few of those primarily. Most of
 17 the aortic aneurysm are seen primarily by the
 18 vascular surgeons.
 19 Q. Under what conditions would you see
 20 patients with aortic aneurysms? Would you be the
 21 diagnosing physician in those cases?
 22 A. Yes. It would be someone who we are
 23 seeing for other reasons, and in the process of
 24 examining the abdomen felt an aneurysm and evaluated
 25 them.

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1 Q. I take it that your opinion is that
2 smoking causes aortic aneurysms?

3 A. Yes.

4 Q. All right. And could you again
5 identify all of the specific bases of that opinion
6 for us?

7 A. Again, it would be based upon my
8 clinical experience. And I don't believe I've ever
9 seen an aortic aneurysm in someone that did not
10 smoke.

11 Q. What percentage of the aortic aneurysms
12 that you have seen in your practice would you say
13 had cigarette smoking as the sole risk factors in
14 the patient's background?

15 A. I would, again, put it roughly the same
16 as I did for the peripheral vascular disease.

17 Q. And that would be greater than 95
18 percent? Oh, excuse me. Wrong question.

19 That would be 70 to 80 percent?

20 A. Yes.

21 Q. All right. So let me restate the
22 question. I think I may have mixed up my figures.

23 Is it true that in your clinical
24 experience in 75 to 80 percent of patients who have
25 aortic aneurysms, cigarette smoking is the sole risk

1 factor in their background?

2 A. At least that much.

3 Q. At least that much.

4 A. Perhaps even higher. But again, I'm
5 having just to estimate what that would be.

6 Q. And is it also correct that in your
7 personal clinical experience that 95 percent of all
8 patients with aortic aneurysms have a history of
9 smoking?

10 A. That much or more.

11 Q. Would that be any history of smoking,
12 Dr. Whittle? In other words, would that include
13 people who smoked half a pack a day for five years
14 as well as people that smoked three packs a day for
15 30 years?

16 A. Again, I have not quantitated this, but
17 my feeling is that it is someone who has smoked
18 significantly. And again, I would have difficulty
19 defining that exactly, but someone who has smoked a
20 significant amount for a significant length of time.

21 Q. Just so I understand, then, when you
22 give me these figures for coronary heart disease,
23 peripheral vascular disease and aortic aneurysms,
24 when you say they had smoking as a sole risk factor
25 in their background or smoking as a risk factor in

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1 their background, that's without regard to amounts
2 smoked?

3 A. That's correct, because I have not
4 quantitated that.

5 Q. And that's without regard to duration
6 of smoking, how many years the patient may have
7 smoked?

8 A. That's correct.

9 Q. You just simply haven't made a study of
10 this in your patient population?

11 A. Yes, because there was no reason for me
12 to.

13 Q. Okay. No reason because, as far as you
14 are concerned, if there was smoking in the
15 background that was enough for you to base a
16 finding or a conclusion of causation?

17 A. Yes.

18 Q. I know we talked a lot of epidemiology
19 but let me ask the question. Are you familiar with
20 epidemiology that discusses the risk for coronary
21 heart disease, peripheral vascular disease and
22 aortic aneurysm as a function of amount smoked?

23 A. It would not -- I am not specifically
24 familiar with it, no.

25 Q. No.

1 And are you familiar with the
2 literature that also looks at those three disease
3 entities and the risk of developing those diseases
4 as a function of duration of smoking, that is, the
5 number of years that one has smoked?

6 A. Again, I'm not intimately familiar with
7 that data.

8 Q. Would it change your opinion if there
9 are data that show that the -- that there is little
10 or no increase in risk for, say, coronary heart
11 disease among people who are light smokers?

12 A. I would just have to look at the data
13 and see how it is collected.

14 Q. It might have an impact on your
15 opinion?

16 A. Again, as I mentioned earlier today, if
17 it's good science, I would accept it.

18 Q. So if -- perhaps if it's science funded
19 by the National Institutes of Health, the National
20 Cancer Institute, that is science you might consider
21 to be good quality science?

22 MR. MIKHAIL: I object to the form but
23 you can answer it.

24 THE WITNESS: If it's in the American
25 Tobacco Institute, if it's good science, it's

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1 good science.

2 BY MR. ANDRADE:

3 Q. You don't -- you don't personally
4 believe that whoever supports the work necessarily
5 guarantees that it's good science; you will evaluate
6 it in its own individual scientific merit --

7 A. That's correct.

8 Q. -- any studies of this nature that
9 might be presented to you?

10 A. That's correct.

11 Q. Would it be of interest to you to have
12 available in the formation of your opinions
13 information concerning the risks of cardiovascular
14 disease including coronary heart disease, peripheral
15 vascular disease, and aortic aneurysms that
16 addressed the relative risk of developing those
17 diseases as a function of smoking cessation? And
18 that is, what the risk is after a people have quit
19 smoking for certain periods of time?

20 A. I would certainly be willing to look at
21 the data.

22 Q. All right. I don't want to get into a
23 lot of unnecessary areas and so I just want to ask
24 one question. Basically your expert opinions in
25 this case are predominantly based on your own

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1 personal clinical experience in your medical
2 practice?

3 A. Yes, it is.

4 Q. And is it fair to say that the only
5 exception to that, you know, would be if some of the
6 articles that we have discussed today that you
7 generally recall reviewing with the 1983 Surgeon
8 General's Report but don't necessarily come to mind
9 today during our deposition?

10 A. That's correct.

11 MR. ANDRADE: Mr. Mikhail, I don't want
12 to mischaracterize our earlier discussion.
13 Did you say that if you provided any
14 information for Dr. Whittle to review prior
15 to trial that you would make that available
16 to us?

17 MR. MIKHAIL: Absolutely. We don't
18 anticipate that we would, but in the event
19 that we do --

20 MR. ANDRADE: I understand. Would you
21 also be amenable to allowing us to question
22 Dr. Whittle further on any additional
23 materials you might provide?

24 MR. MIKHAIL: If there is any
25 additional material that we give him to

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1 review that he indicates he's going to rely
2 upon in his testimony, we will certainly give
3 you an opportunity to redepose him only for
4 the limited purpose of asking him about those
5 documents.

6 But I will say, so the record will be
7 absolutely clear, we will not offer him
8 voluntarily for redeposition for you to
9 depose him on just anything that we provide
10 him if he doesn't rely on it. And the reason
11 I say that is so you will understand neither
12 Ms. Wagner nor I neither Dr. Whittle know why
13 that cartoon candy article was furnished to
14 him by someone on our side, and he obviously
15 didn't rely on it. He said he didn't rely on
16 it.

17 If something like that were to happen,
18 a paralegal in the firm is instructed by
19 someone to send it to everybody, I don't want
20 you to have a chance to redepose him because
21 of that. If he relies on it, certainly.

22 BY MR. ANDRADE:

23 Q. You are not going to be relying on that
24 document at all --

25 A. No.

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1 Q. -- for any of your opinions? I think
2 you testified you haven't.

3 A. That's correct.

4 MR. MIKHAIL: I just don't want every
5 time somebody mails something to him that
6 warrants re-deposition.

7 MR. ANDRADE: I understand.

8 MR. MIKHAIL: Is that good?

9 THE WITNESS: That's good.

10 MR. MIKHAIL: Okay.

11 BY MR. ANDRADE:

12 Q. Doctor, are clinical observations based
13 on one's individual practice, when you view that
14 data, to be of the same scientific value as
15 carefully designed and controlled epidemiological
16 studies?

17 A. I think if I'm dealing with a patient
18 in the middle of the night and there's a real
19 problem, the information that I have available to me
20 from a clinical experience is incredibly worthwhile.
21 There may be some few articles and things that may
22 make such a difference, you know, with what I'm
23 going to do that may be particularly important. But
24 I think I probably rely on my clinical experience
25 probably more so than anything.

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Q. Would you agree that one's clinical experience is not the same as a controlled scientific study?

A. That's correct.

Q. You -- you accumulate your experience in dealing with a number of patients but you don't go back and pull from the records, for instance, for every patient that you have seen with coronary heart disease information about smoking history, diet, exercise level, diabetes, so on and so forth? You haven't done that, you haven't collated that information?

A. No. But I might also say that quite the opposite is also the case, and that is that many times those of us with a large clinical experience have had ideas and thoughts that we have not had the time to pursue which years later turned out to be the case.

So that's not to downgrade the importance of the clinical experience because, again, if we had the time and the means, we could probably do the same thing. But I think many of us with a great deal of experience have been led to the same conclusion of some long studies before the studies were even done or conceived of.

Q. You have not applied any statistical analyses to your clinical observations?

A. No.

Q. The percentages you offered today are your best estimates based on your experience?

A. That's exactly right.

Q. Okay. But in the sense of biostatistics or epidemiology, you haven't done any statistical analysis using formal statistical tests?

A. That's correct.

Q. Okay. When you accumulate your clinical experience based on viewing patient after patient after patient, have you attempted to, in some way, control, you know, for different variables that you would consider to be potential causes for cardiovascular disease?

A. No, because that's impossible for me to do.

Q. That just isn't possible in the context of a clinical practice?

A. Not with what I do.

Q. All right. Are you familiar at all, Dr. Whittle, with any of the animal inhalation experiments that have exposed animals in laboratories to tobacco smoke?

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A. No, I'm not.

Q. Okay. You have no knowledge of those whatsoever?

A. No.

Q. Do you have any knowledge of a large scale inhalation study funded by the American Cancer Institute that occurred sometime in the late seventies, early eighties?

A. No, I'm not.

Q. Not aware of that at all?

A. No.

Q. Okay. Would you consider animal inhalation experiments, where animals were exposed to tobacco smoke but were fed the same diet or handled in the same manner who were put under the same degree of stress, you know, were monitored to ensure relatively the same levels of cholesterol, so on and so forth, where other risk factors were controlled for, would you view those to be -- the results of those to be important information to someone who is making causal judgments about smoking and heart disease?

A. I don't know if I would or not because it depends upon which animal is being used, and is that animal one to develop atherosclerosis. For

example, you can feed a rabbit a high atherosclerotic diet and they will develop blood vessel occlusions; however, histologically it's not precisely the same as what you see in humans. So I don't know if that data can be extrapolated necessarily.

Q. Okay. Assuming that the scientists have thought about that problem and have selected a model that can develop human-type atherosclerosis. Assuming that fact or, excuse me, assuming that, would the results of those experiments be of interest to you in formulating any of your opinions?

A. It would be such a tremendous leap of faith, I don't know if you can make that.

Q. Because you think that the results of animal experiments aren't extrapolable (sic) to the human population?

A. Some are clearly not.

Q. Would you say that all animal experiments aren't extrapolable or cannot be extrapolated to the human population?

A. No, I can't say that. I don't know if it can be extrapolated or not.

Q. Certainly our regulatory agencies, such as the Food and Drug Administration, rely on animal

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1 data, don't they?
 2 A. Yes.
 3 Q. So would you agree that animal data and
 4 properly designed, properly conducted animal studies
 5 would have some relevance to the human situation in
 6 terms of whether smoking causes cardiovascular
 7 disease in humans?
 8 A. I don't know if that's the case or not.
 9 Q. But if that data exists would it be of
 10 interest to you as a physician and scientist?
 11 A. It would be of interest. But again, I
 12 don't know if that data can be extrapolated. Just
 13 as an example of what I mentioned in rabbits because
 14 I don't know if it's of the same histological.
 15 I think if you are looking at drug
 16 studies as far as physiologic responses, if you are
 17 looking at devices as far as safety of devices, that
 18 I think you can look at more easily. But as far as
 19 a study like, when you are looking at a totally
 20 different biological system, I don't know if that
 21 data could be extrapolated to humans or not.
 22 Q. You simply don't know?
 23 A. And I don't know the results, whether
 24 they're pro or con, that you are discussing.
 25 Whichever they are, it would bother me to look at

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1 that data not knowing if, with a different specie,
 2 if that can be extrapolated.
 3 Q. Assuming that there have been studies
 4 on a number of species -- and indeed, strains of
 5 species -- would that data be of interest to you to
 6 comb through to see if there were animal models used
 7 that you think would be extrapolable to the human
 8 situation?
 9 MR. MIKHAIL: I object.
 10 THE WITNESS: Yeah.
 11 MR. MIKHAIL: You have asked that many
 12 different ways and he's answered it.
 13 MR. ANDRADE: Well, I've asked the
 14 question many different ways but I'm not sure
 15 I've got an answer as to whether or not that
 16 information would be of value to Dr. Whittle
 17 in determining his position on causation.
 18 He's said that he's not familiar with those
 19 studies; therefore, it's difficult to ask him
 20 questions.
 21 MR. MIKHAIL: If you don't get the
 22 answer you want, that's not the standard,
 23 that's not the test.
 24 I think he's answered to the best of
 25 his ability as to whether or not -- as you

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1 asked him -- whether they would be of
 2 interest to him and I think he qualified as
 3 to be would have to know more about the
 4 specifics and the details and that sort of
 5 thing.
 6 MR. ANDRADE: That's fine. Let me just
 7 ask a couple of questions without specifics.
 8 MR. MIKHAIL: If you could ask them in
 9 a different way that would put an end to it.
 10 BY MR. ANDRADE:
 11 Q. You have rendered your opinions in this
 12 case without regard to animal inhalation data; is
 13 that correct?
 14 A. That's correct.
 15 Q. You have rendered your opinions in this
 16 case without any analysis of any animal experiments
 17 involving individual constituent of cigarette smoke;
 18 is that correct?
 19 A. That's correct.
 20 Q. You have just not listed that
 21 literature at all; is that correct?
 22 A. That's correct.
 23 MR. ANDRADE: All right.
 24 Can I ask how much time we have on the
 25 tape? I might be able to give an estimate of

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1 when we might be finished.
 2 THE VIDEO TECHNICIAN: About an hour
 3 and five minutes.
 4 BY MR. ANDRADE:
 5 Q. Dr. Whittle, do you know what an
 6 intervention trial is?
 7 A. I'm not familiar with that term. If
 8 you could explain that to me.
 9 Q. Do you know the type of epidemiological
 10 study that's termed an "intervention trial"? Do you
 11 know what kind of study that is?
 12 A. I would presume that if you do some
 13 intervention of removing some factor or treating
 14 some factor to see if it changes the outcome. Is
 15 that what you are referring to?
 16 Q. Yes. Are you aware of any intervention
 17 trials concerning cardiovascular disease?
 18 A. Yes, I am.
 19 Q. And could you identify those for me.
 20 A. These are -- the studies that I'm more
 21 familiar with are those with relationship to
 22 cardiovascular mortality and even noncardiovascular
 23 mortality related to hypercholesterolemia. There's
 24 been some landmark studies in those that have been
 25 done recently.

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1 There are some other studies with drugs
2 such as beta blockers in people post heart attack
3 that have shown reduced risk of sudden death.
4 There's also studies that have been done with some
5 of the so-called Ace Inhibitors, so, yes, I am
6 familiar with those in those fashions.

7 Q. Are you aware of any intervention
8 trials that have looked at cigarette smoking and
9 cardiovascular disease?

10 A. No, I am not.

11 Q. So, as you sit here today, you can't
12 identify any intervention trials that have looked at
13 groups where one group has had the level of
14 cigarette smoking reduced, the other group was left
15 its usual, that has followed the two groups to
16 observe outcomes in cardiovascular disease
17 mortality?

18 A. That's correct.

19 Q. Would this be information, if such
20 studies exist, that would be of interest to you as
21 an expert in formulating your opinion as to whether
22 or not cigarette smoking causes heart disease?

23 A. Yes. Again, I would have to look at
24 the study and evaluate the science. And if that was
25 appropriate, I would be more than happy to look at

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1 it.

2 Q. So at least you would find this
3 information of interest --

4 A. Yes.

5 Q. -- depending upon your assessment of
6 its quality --

7 A. That's correct.

8 Q. -- and scientific merit?

9 MR. ANDRADE: We can go off the record?

10 (Thereupon, a discussion was held off
11 the record.)

12 BY MR. ANDRADE:

13 Q. Dr. Whittle, have you ever heard of the
14 "Multiple Risk Factor Intervention Trial" conducted
15 with support by the National Heart, Lung and Blood
16 Institute?

17 A. Yes, I am.

18 Q. What is your knowledge of that study?
19 Can you describe it for me, please?

20 A. Again, I would have to have the
21 original papers right in front of me in order to
22 know the specifics, but it was a study that looked
23 at the various risk factors in the development -- I
24 don't recall if it was an interventional study
25 exactly. It may have been, but I would have to look

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1 at some of the specifics. I am aware of the study.

2 Q. Right. You don't recall what risk
3 factors were evaluated in that study?

4 A. That's why I would have to look at the
5 original.

6 Q. Do you recall the results of those
7 studies?

8 A. That's why I would have to look at the
9 original paper.

10 Q. You don't recall the results as you sit
11 here today?

12 A. Not specifically, because I see so many
13 of those studies, particularly over the last few
14 months, that I would have to go back and look at
15 that one specifically.

16 Q. Do you know if in that study the
17 intervention group significantly reduced its smoking
18 compared to the usual care group?

19 A. I would have to look at that data.

20 Q. You have no recollection of the
21 specifics of the study?

22 A. Not specifically.

23 Q. Do you consider the MRFIT study to be
24 an important piece of epidemiological work in the
25 area of smoking and cardiovascular disease?

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1 A. Again, what I would have to do is to go
2 back and look at the specifics of the paper, knowing
3 when it was written, what was going on at the time,
4 and what the data showed.

5 Q. All right. But you said you were aware
6 of the study, correct?

7 A. Yes.

8 Q. You don't need to go back and look at
9 the paper to answer the question: Do you consider
10 it to be an important study in the field of
11 cardiovascular disease and cigarette smoking?

12 A. Again, I would have to go back and look
13 and see what that data showed exactly. And then I
14 can tell you in the context of the time in the
15 present if it's important or not.

16 Q. Do you recall if it was a major study?

17 A. It was a very major study.

18 Q. A very important study?

19 A. It's a very major study. But again, I
20 would have to go back and evaluate the data in the
21 context of today's data, and see, is it important
22 and is it meaningful?

23 Q. But as an expert, offering your expert
24 opinions here today, you have no recollection of any
25 details of what you would refer to as a major study,

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1 the MRFIT study?

2 A. It's an older study, and rather than
3 misspeak I would rather go back and look at that
4 data before I said anything.

5 Q. Do you know when it was conducted? Can
6 you give me a time period?

7 A. That's why I was making the comment
8 that I would need to look to see when it was done
9 and how it was done, so --

10 Q. You are not relying on the results of
11 the MRFIT study at all in providing your expert
12 testimony here today?

13 A. No, I'm not.

14 Q. Are you familiar with the U.K.
15 Whitehall Study?

16 A. No, I am not.

17 Q. Are you familiar with the Intervention
18 Trial conducted in Norway that's commonly referred
19 to as the Oslo Study?

20 A. Was that the original Oslo Heart Study?

21 Q. The intervention trial conducted in
22 Norway.

23 A. Which one?

24 Q. I'm asking you. Can you name more than
25 one? How many studies are you familiar with?

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1 A. There are several that have been done
2 in Norway. Is this the Oslo Heart Study? Do you
3 know what the date on that was?

4 Q. I don't have that information with me,
5 I'm afraid.

6 A. If you are referring to the original
7 Oslo Heart Study, that was looking at the effect of
8 lowering the cholesterol on coronary mortality, and
9 there were some problems with that study at the time
10 because of the drugs that were available at the
11 time, if that's the one you are referring to.

12 Q. Do you know if the MRFIT study is still
13 continuing today?

14 A. Again, as I mentioned to you, I would
15 have to go back and I would have to look at that. I
16 do not know.

17 Q. You don't know?

18 A. No, I don't.

19 Q. Are you familiar with the World Health
20 Organization's European Collaborative Study which
21 was an intervention trial looking at risk factors
22 for cardiovascular disease and cardiovascular
23 disease outcomes?

24 A. I may be familiar with some of their
25 data, but I don't remember the study specifically.

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1 Q. You have no specific recollection of
2 that?

3 A. That's correct.

4 Q. Are you familiar with the Intervention
5 Trial looking at cardiovascular disease risk factors
6 and cardiovascular disease outcomes that is commonly
7 referred to as the Helsinki Study?

8 A. I am vaguely familiar. Again, I am
9 vaguely familiar with it.

10 Q. But you recall no specifics?

11 A. I would have to go back and look at the
12 paper to get very specific.

13 Q. All right. You couldn't discuss the
14 basic design of the study here today?

15 A. No.

16 Q. And you couldn't discuss the major
17 findings of the study?

18 A. No. If I went back and looked at the
19 paper I could.

20 Q. How about the Goteborg,
21 G-O-T-E-B-O-R-G, Study in Sweden, which was another
22 cardiovascular disease intervention trial, are you
23 aware of that study?

24 A. I am aware of it. But again, if you
25 had wanted me to review these, I would have been

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1 glad to have done so. But rather than misspeak, I'm
2 not going to go back and comment on something I
3 haven't looked at for a number of years.

4 Q. So, once again, you wouldn't be able to
5 discuss even the major findings?

6 A. I would not even attempt to unless I
7 reviewed those recently. I have read all of those
8 original reports at one time, but that's been quite
9 some time ago, so I don't think it's fair for me to
10 comment on those unless I have reviewed those
11 recently.

12 Q. Do you know when the Goteborg Study was
13 conducted?

14 A. No, I don't.

15 Q. The Helsinki Study?

16 A. Sir, I have just mentioned that I would
17 have to go back and look and see when all of those
18 studies have been done.

19 Q. I'm just asking you if you know when
20 that study was conducted.

21 A. No. I've already answered that.

22 Q. What about the WHO European
23 Collaborative Study, do you know --

24 A. I've already answered that.

25 Q. The Whitehall Study?

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1 A. I've already answered that.
2 Q. And your answer is no, you don't know
3 when it was conducted?
4 A. That's correct.
5 Q. Dr. Whittle, let me read a statement to
6 you and ask you if you agree with this. And I'm not
7 quoting from a study.
8 "Randomization means that
9 participants in the study are randomly
10 assigned to an intervention group and
11 to a control group. The intervention
12 group received efforts to reduce risk
13 factor levels; the control group does
14 not. Since which subjects are assigned
15 to each grouping is determined
16 randomly; i.e., simply by chance, the
17 two groups would be expected to be
18 similar at the start of the study.
19 Thus any subsequent differences in CHD
20 mortality or incident rate can more
21 reliably be associated with the
22 different ways the groups were
23 treated."
24 Would you agree with that?
25 A. And that could be the case, but it

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1 depends upon if you are looking at a population,
2 say, where the incidence of coronary disease, for
3 example, is very high, then that may be -- that may
4 be a valid statement.
5 If you are looking at a group where the
6 incidence of coronary disease is very small or if
7 the population sample is very small, that data may
8 not be applicable. That's why you have to examine
9 each study on its own merit.
10 Q. Would you agree with that statement, if
11 you had a sufficient sample size, say, the magnitude
12 of 12,000 individuals?
13 A. Yes. If the incidence of the disease
14 that you were looking for was significant in that
15 population, then, yes, that would be significant.
16 Q. Again, the statement I read
17 specifically stated coronary heart disease.
18 A. That should be sufficient.
19 Q. Is coronary heart disease the major
20 cause of death among nonsmokers?
21 A. I've really never looked at it from
22 that viewpoint, so I can't answer that.
23 Q. So you don't know if that's the most
24 common cause of death among nonsmokers?
25 A. I've never been asked that question in

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1 that fashion so I really can't answer.
2 Q. Do you know what percentage of people
3 who -- of the people who die every year in the U.S.,
4 what percentage of those people die of some form
5 cardiovascular disease?
6 A. It's the leading cause of death, but
7 what percentage that is, I don't know.
8 Q. Could you give me an estimate or --
9 A. No. I would not even begin to.
10 Q. -- you just don't have that
11 information?
12 Do you follow the literature in the
13 cardiovascular disease area very closely?
14 A. Reasonably closely.
15 Q. Could you tell me roughly when was the
16 last time you saw a study -- excuse me -- a
17 scientific paper, journal or article published on
18 the basis of MRFIT, the MRFIT study?
19 A. I've seen papers within the last few
20 months that have gone back and referenced to that
21 with some of the interventional trials on
22 hypercholesterolemia. But as far as which articles
23 specifically, I can't recall.
24 Q. In terms of articles that came from the
25 MRFIT study itself, do you recall the last time you

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1 saw any article reporting results from the MRFIT
2 Study?
3 A. I don't recall.
4 Q. How about the Whitehall study from the
5 U.K.?
6 A. As I've said, I don't recall.
7 Q. Doctor, I think earlier you mentioned
8 that the Braunwald text was a text, while you
9 wouldn't consider it authoritative, you would
10 consider it to be an excellent text; is that
11 correct?
12 A. That's correct.
13 Q. Okay. In fact, you wrote in an article
14 a number of years ago, I believe, that this text, an
15 article that was written in 1982, was an excellent
16 cardiology text. Would you still agree with that?
17 A. It's an excellent text, yes.
18 Q. Would you go to Braunwald's as a source
19 of information if you were looking for reliable
20 information in the field of cardiovascular disease?
21 A. If I was going to -- it depends upon
22 what I was looking for. If it was something new, I
23 would not. I would go more to a computer literature
24 search because it would be newer. If it was
25 something old, such as "Primary Tumors of the

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1 Heart," or something like that, that has changed
2 very little, then I might go back and look.

3 Q. But your characterization of the
4 Braunwald text as being an excellent text would at
5 least be a fair characterization as of the edition
6 that you were speaking of when you wrote this
7 article?

8 A. Yes.

9 (Thereupon, the document was marked
10 Defendant Lorillard's Exb. No. 14 for
11 Identification.)

12 BY MR. ANDRADE:

13 Q. I'd like to mark what is Defendant's
14 Exhibit No. 14, okay, Doctor, and give that to you.
15 And this is a chapter from a book entitled "Heart
16 Disease, a Textbook of Cardiovascular Medicine."

17 A. Uh-huh.

18 Q. Edited by Eugene Braunwald.

19 A. 1980.

20 Q. 1980. And I'd like to direct your
21 attention to page 1247.

22 A. Okay.

23 Q. And the upper left-hand corner, the
24 first column, if I could read that to you and ask
25 you if you agree with it.

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1 "In the late 1940s and early
2 1950s, several studies of free-living
3 populations were begun to discern the
4 factors associated with the occurrence
5 of coronary heart disease and how the
6 disease evolves and terminates in a
7 total population. Clinical impressions
8 were soon confirmed: Coronary heart
9 disease did not occur randomly in the
10 population. Its rate of occurrence
11 varied greatly according to demographic
12 factors such as age, race and sex.
13 Personal attributes detectable by
14 simple medical examination: high serum
15 cholesterol, high blood pressure,
16 hyperglycemia and obesity were found to
17 increase the frequency of the disease.

18 "Personal habits, which the
19 patient could easily recognize
20 themselves, cigarette smoking, lack of
21 exercise, nutritional habits, were also
22 investigated. More recently, some
23 specific environmental hazards: carbon
24 disulfide, oral contraceptives, have
25 been associated with increased

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1 Occurrence of CHD. Underlying these
2 factors, familial and genetic effects
3 are believed to play an inceptive role
4 in concert with their complex
5 interrelationships with social and
6 psychological factors."

7 That's a long statement. Would you
8 agree with that?

9 A. I don't know what some of this means.
10 I'm not sure I understand what an "inceptive role"
11 is. I've never seen the word "inceptive" in my
12 life.

13 Q. So you wouldn't have a personal
14 definition for it if you haven't encountered the
15 word before?

16 A. Do you know what it is, because I have
17 no idea?

18 Q. I'm afraid I don't.

19 A. Now, these statements, I think, are so
20 general it's difficult to really say much. But some
21 of this I just don't quite understand what their
22 point is.

23 Q. Would you agree with the sentence in
24 that statement:

25 "Personal attributes, detectable

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1 by simple medical examination: high
2 serum cholesterol, high blood pressure,
3 hyperglycemia and obesity were found to
4 increase the frequency of the disease"?

5 A. I would agree with that.

6 Q. Would you agree with the sentence:

7 "More recently, some specific
8 environmental hazards: carbon
9 disulfide, oral contraceptives, have
10 been associated with increased
11 Occurrence of coronary heart disease"?

12 A. Are you asking if I would agree with
13 that?

14 Q. Yes.

15 A. I know absolutely nothing about carbon
16 disulfide. I don't know that that's really panned
17 out. And also with regard to oral contraceptives,
18 there may be some increased incidence of coronary
19 thrombosis but not necessarily coronary
20 atherosclerosis.

21 But you also have to remember that this
22 was published in 1980, which probably means that
23 some of the data in here is three years old, so
24 we're looking at 20-year-old data. And so I'm
25 thinking it may have been very appropriate at the

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1 time, but I think at this time it's not quite
2 up-to-date.

3 Q. Are you aware of subsequent literature
4 in the area of oral contraceptives associating them
5 with increased risk for coronary heart disease in
6 women?

7 A. With coronary thrombosis but not with
8 development of atherosclerosis. And the carbon
9 disulfide I'm not familiar with at all.

10 Q. Okay. Can coronary heart disease
11 result from thrombosis as well as atherosclerosis?

12 A. Yes.

13 Did you want this back?

14 Q. Yes, please. Put it in here.

15 Earlier, Dr. Whittle, I asked you a
16 series of questions about ascertaining the
17 biological cause of a disease of the circulatory
18 system by virtue of examining tissue. And I asked
19 that question in the context of multiple risk
20 factors.

21 If you have one of the patients that
22 you referred to later, who only had smoking as a
23 risk factor in his background and who had -- that
24 individual suffered a heart attack, could you look
25 at that heart and identify any marker for cigarette

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1 smoking that would allow you to say, Here is
2 biological demonstration that cigarette smoking
3 causes heart attack?

4 A. I think just as I said earlier, the
5 answer would be no. But again, though, we're
6 looking at the final common pathway. And I think we
7 can't really make any comments about that.

8 If there are no other known risk
9 factors, we have to look at the whole system in
10 totality. And in that case, yes, we can say that.
11 But as far as looking at anything pathologic and say
12 is that a marker, the answer is no.

13 Q. Okay. I didn't ask the question with
14 respect to individuals who only have cigarette
15 smoking as a risk factor in their background, but
16 with respect to aortic aneurysm or coronary heart
17 disease or peripheral vascular disease, you couldn't
18 look at the diseased tissue, you couldn't look at
19 the atherosclerotic build up and find any marker
20 that have indicated it was cigarette smoking that
21 caused that disease; is that correct?

22 A. That's correct. I think we've said the
23 same thing earlier also.

24 Q. All right.

25 MR. ANDRADE: If we can go off the

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1 record for a minute.

2 (Thereupon, a discussion was held off
3 the record.)

4 (Thereupon, a recess was taken.)

5 BY MR. ANDRADE:

6 Q. Dr. Whittle, are you familiar with the
7 Framingham Study?

8 A. Yes, I am.

9 Q. Isn't it true, Dr. Whittle, that the
10 data from the Framingham Study reported no
11 association between angina and cigarette smoking?

12 A. I don't recall the specifics over the
13 years to be able to comment on that.

14 Q. But you have no recollection of the
15 major findings of that study?

16 A. Yes, I do, some of the major findings.

17 Q. What, in your opinion, are some of the
18 major findings of the Framingham Study?

19 A. The relationship between
20 hypercholesterolemia and coronary disease and
21 smoking and coronary disease.

22 Q. All right. So the Framingham Study, in
23 your opinion, found that high cholesterol levels was
24 associated with the development of coronary heart
25 disease?

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1 A. Again, I would have to go back and
2 review the last data. That data is still coming out
3 from the Framingham Study. But before making any
4 specific comments, I would almost have to review
5 some of the recent data.

6 Q. But you have no, as we sit here today,
7 no recollection of their findings with respect to
8 cigarette smoking and angina?

9 A. Again, I think I've read just about
10 every report that's come out of Framingham, but to
11 get specific I would have to go back and review
12 those.

13 (Thereupon, the document was marked
14 Defendant Lorillard's Exb. No. 15 for
15 Identification.)

16 BY MR. ANDRADE:

17 Q. Let me hand you what's been marked as
18 Defendant's Exhibit 15. And for the record, it's an
19 article entitled, "The Negative Association in Women
20 Between Cigarette Smoking and Uncomplicated Angina
21 Pectoris in the Framingham Heart Study," by Carl
22 Seltzer from the "Journal of Clinical Epidemiology."

23 And Doctor, if I could direct your
24 attention to the second half of the abstract. I'd
25 like to read it to you and see if you agree with it.

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1 "The published declarations by
2 Framingham investigators of an absence
3 of association between cigarette
4 smoking and angina pectoris in
5 Framingham women is a failure to
6 publicly recognize the distinctive
7 negative association present in the
8 Framingham female data. The Framingham
9 data on the relationship of smoking to
10 angina incidence is clearly a variance,
11 with the Surgeon General's sketchy
12 finding of an inconsistent positive
13 association for men and an uncertain
14 relationship for women.

15 "It is suggested that special
16 attention should be directed to these
17 results of the Framingham data because
18 of the preeminence of Framingham
19 material world wide because angina
20 pectoris is the most common
21 manifestation of coronary heart
22 disease, because it will improve the
23 'conventional wisdom' on the subject,
24 and because the negative relationship
25 found for Framingham women does not

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1 lend support to the belief held by some
2 that smoking enhances the degree of
3 coronary atherosclerosis."

4 Do you agree with that statement?

5 A. I don't know. And let me say why I
6 don't know. I would have to go back and look and
7 see. Because of the relationship between cigarette
8 smoking and angina pectoris, there have been a
9 number of studies done over the years in which
10 angina pectoris was assumed to be a manifestation of
11 coronary disease but without objective findings.

12 There are some chest pain syndromes
13 that may mimic angina dramatically. Unless there is
14 some objective data to show that that was angina and
15 not just a chest pain syndrome that was similar to
16 angina, I would need to know. Otherwise, you're
17 drawing conclusions about something that may be
18 invalid. Your assumption is that the angina
19 pectoris is coming from coronary disease. But
20 unless that's substantiated in some fashion, that
21 may not be a valid assumption. So I would have to
22 look at the data more specifically and the methods.

23 Q. Well, what are some of other sources of
24 angina pectoris?

25 A. Well, one of the things you have to

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1 also consider is that sometimes esophageal spasm can
2 mimic angina precisely. Specifically in women
3 there's a problem called Syndrome X which there is
4 two different Syndrome X's, one of which is angina
5 with small coronaries which does not have the same
6 prognosis.

7 So if someone has angina, is this truly
8 angina? Is it angina due to epicardial coronary
9 disease? Is it angina due to small vessel coronary
10 disease? Is this esophageal reflux?

11 The problem is, if you have a
12 hodgepodge of diagnoses that you are calling angina
13 and then you are trying to correlate an association
14 with cigarette smoking and that, unless you've got
15 objective evidence by either stress testing or
16 coronary angiography, that may not be a valid
17 assumption.

18 Q. Because it may not be angina pectoris
19 as defined in a more precise sense?

20 A. No, no. Angina pectoris is a clinical
21 diagnosis but it needs to be substantiated to see if
22 **its on the basis of a problem with the coronary**
23 **circulation.**

24 Q. So the pain that would be defined by
25 angina pectoris may have some other sources?

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1 A. That's correct.

2 Q. I didn't realize the confusion.

3 A. And that's why -- if -- there was a
4 study that was done many years ago about looking at
5 aspirin. And there was a major problem with the
6 study because people were lumped into the diagnosis
7 of having angina pectoris who were enrolled in the
8 study, one of whom was my brother-in-law at the time
9 and who actually had a collapsed lung.

10 So the problem is that when you start
11 making associations without objective findings, you
12 can really get into trouble. So I would need to
13 know within the methods if it was truly established
14 as being on the basis of coronary disease before I
15 would accept this as being valid.

16 Q. Okay. All right. Have you any
17 opinions on whether or not angina pectoris is
18 associated with cigarette smoking in the females in
19 your particular practice?

20 A. Again, I can maybe make some comments
21 about an association between angina -- I mean
22 between coronary disease and smoking, but not
23 necessarily angina and smoking.

24 Again, because sometimes the diagnosis
25 of angina -- as you brought up yourself earlier --

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1 if someone comes into the office and says, I have
2 angina, then I'm going to question if that's really
3 angina or not.

4 Q. I see.

5 A. And that's really part of the problem.

6 Q. Okay.

7 Doctor, I would like to read a
8 statement to you, and unfortunately I don't have the
9 article--

10 A. Are we done with this?

11 Q. Yes.

12 --because the Federal Express failed us
13 and the article that was supposed to be sent did not
14 arrive. But I will give you the citation. The
15 citation is from an article entitled, "Coronary
16 Health Promotion: An Overview," appearing in the
17 journal, "Prevention of Myocardial Infarction."

18 A. That's the name of the journal?

19 Q. Yes. I stand corrected. It's actually
20 a book, so it's actually a book. The first author
21 is C.J. O'Donnell. So let me read it to you and ask
22 if you agree with it.

23 MR. MIKHAIL: Let me make sure I get
24 this. The book is called "Coronary Health
25 Promotion"?

1 MR. ANDRADE: That, I would imagine, is
2 the chapter title, "Coronary Health
3 Promotion: An Overview." And then
4 "Prevention of Myocardial Infarction" would
5 be --

6 MR. MIKHAIL: -- the book. And the
7 author is C.J. O'Donnell?

8 MR. ANDRADE: C.J. O'Donnell.

9 MR. MIKHAIL: I'm sorry. I didn't mean
10 to interrupt; I wanted to write it down.

11 MR. ANDRADE: That's quite all right.

12 BY MR. ANDRADE:

13 Q. Doctor, beginning with, "Controlled
14 trials, preferably with randomization,
15 have become the gold standards for
16 proof of a benefit from preventive or
17 other interventions. And large scale
18 trials allow reliable comparison of
19 benefits versus risks. Proper
20 randomization is a sample of adequate
21 size, virtually eliminates the chance
22 of baseline differences among treatment
23 groups will play any meaningful role in
24 the study outcome, and blinding, if
25 possible, further reduces the risk that

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1 any observed differences could be
2 attributed to non trial treatments that
3 differed after randomization. Thus the
4 quality of evidence in preventive
5 interventions is strongest if derived
6 from properly designed, randomized
7 controlled trials. Less strong if
8 derived from cohort or case controlled
9 studies and weakest if derived from
10 descriptive studies or from the
11 clinical experience of one or
12 a few experts."

13 MR. MIKHAIL: Would you like to have
14 that in front of you before you ask any
15 questions?

16 THE WITNESS: Yeah.

17 MR. ANDRADE: I'll be glad to do that.

18 MR. MIKHAIL: It's hard to just hear.

19 MR. ANDRADE: Is there any need to mark
20 it as an exhibit because I won't have a copy?
21 I'll have to remove --

22 MR. MIKHAIL: I'll leave that up to
23 you. Just wanted to be able to see it.

24 MR. ANDRADE: Bear with me as I remove
25 information. I'll do this and I'll probably

1 mark it for the record.

2 MR. MIKHAIL: I think it's so much
3 easier when it's a paragraph long.

4 THE WITNESS: Particularly at this
5 hour.

6 MR. ANDRADE: We'll mark this as
7 Defendant's Exhibit No. 16. Again, it would
8 be a chapter entitled "Coronary Health
9 Promotion: An Overview," from a book
10 entitled "Prevention of Myocardial
11 Infarction," first author, C.J. O'Donnell.

12 (Thereupon, the document was marked
13 Defendant Lorillard's Exb. No. 16 for
14 Identification and subsequently replaced with
15 the revised copy.)

16 MR. MIKHAIL: Take a moment to look at
17 it if you need to.

18 THE WITNESS: There is one
19 typographical error in here. It doesn't make
20 any sense. It says, "Proper randomization as
21 a sample of adequate size virtually
22 eliminates the chance that baseline
23 differences --"

24 That doesn't make any sense, so I don't
25 know if this was transcribed properly.

*** Notes ***

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BY MR. ANDRADE:

Q. I'm not sure, Dr. Whittle.

A. That kind of throws off the --

Q. Does that make it impossible for you to --

A. Yes. That makes no sense at all.

Q. -- offer as to whether you agree to it or not?

A. Yes.

MR. MIKHAIL: Is that going to be your question, as to whether it he agrees with the paragraph or not?

MR. ANDRADE: Yes.

THE WITNESS: I can't say that because I think it's been transcribed improperly.

BY MR. ANDRADE:

Q. Maybe I can check on whether the transcription is accurate or not and then ask you some other questions on one last area.

Your expert disclosure indicates that you are going to be offering expert opinions on the ordinary costs associated with the various cardiovascular diseases that we've discussed today.

Can you tell me what your opinions are going to be and the bases of those opinions, please?

A. Really the only thing I think I have to add in that view is the rough cost of intervention, such as catheterization, angioplasty, heart attack, bypass surgery on an individual patient because that's the data that I have in my head.

Q. Will your testimony be as to the market price, if you will, of the cost in this area for each of those procedures?

A. I would presume so.

Q. Will you offer testimony on the, perhaps, individual variation of costs based on other considerations?

A. I would presume so but I obviously wouldn't be the one asking the questions so that would be difficult for me to say.

Q. What opinions do you expect to offer in that regard?

A. If asked, I'll be glad to make some --

Q. This is my opportunity, Doctor, to ask you what opinions you expect to offer at trial.

A. I think it would just be that if you ask me what is the cost of various interventions, I can tell you roughly what those are.

MR. MIKHAIL: Are you asking him what those are?

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MR. ANDRADE: I'm asking what opinions he expects to offer at trial.

BY MR. ANDRADE:

Q. And if I understand correctly, you are saying you will testify as to the costs of various procedures?

A. That would be all I would anticipate.

Q. So if I were to ask you what the cost of angioplasty is, you would respond by giving a particular dollar figure?

A. Yes.

Q. Have you done any studies with respect to these health care costs?

A. No. This would be, again, just talking with patients and knowing about what costs run. Again, in today's managed care environment, that varies from person to person dramatically, but that's all. I've not done any cost analysis.

Q. So, again, your testimony would be limited to your clinical experience and offering, perhaps a range of prices for various procedures --

A. Right.

Q. -- that you might conduct and others might conduct on cardiovascular diseased patients?

A. Right. And I think that would be a

very small part of what I was asked to do.

Q. Are you going to offer any opinions about differential costs between Medicaid patients and other patients?

A. I would be happy to, if I was asked that.

Q. Do you expect to offer that kind of testimony on behalf of the State of Florida? Have you been asked to render opinions in that area?

A. No, I have not.

Q. So you don't expect to render opinions in that area?

A. If I was asked, I would be happy to within what I am able to, but I've not been asked.

Q. What I'm here to find out about is what opinions you expect to offer at trial. And that is not a function of what you might be asked.

But while you've been retained for this lawsuit, have the State of Florida attorneys asked you to offer opinions as to differential costs of procedures as between Medicaid patients and normal patients?

MR. MIKHAIL: Before you answer that, maybe this will make things clearer. If not, please feel free to ask the question again.

*** Notes ***

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1 Dr. Whittle is not going to be asked
2 and he is not retained to give opinions as to
3 what cardiovascular disease or coronary heart
4 disease costs the state taxpayers in Florida,
5 if that is what you are asking.

6 BY MR. ANDRADE:

7 Q. Yes. And I think you have answered --
8 specifically answered this earlier but I want to
9 make sure, because I didn't ask you in the context
10 of your expert report, that your testimony won't be
11 tied to the bottleneck that will be at issue in the
12 case?

13 MR. MIKHAIL: It won't be. As to the
14 calculation of damages, no, not at all. His
15 testimony is strictly medical. And the
16 ordinary costs which I tried to clarify this
17 morning -- because it was unclear and I'll
18 grant you that -- is costs he's familiar with
19 as to how much does it cost to do an
20 angioplasty. And to give an idea of what it
21 costs to treat a patient with the various
22 forms of cardiovascular disease that he
23 encounters. It was not tied to the model, it
24 isn't tied to the model, and he has no
25 expertise and is not going to be offering

*** Notes ***

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1 private insurance?

2 MR. MIKHAIL: As counsel for the
3 plaintiffs, I think that's a very fair
4 characterization.

5 MR. ANDRADE: And that will save us a
6 lot of time. If I may just check.

7 MR. MIKHAIL: Okay.

8 BY MR. ANDRADE:

9 Q. I think we have it. Will you allow me
10 to make a correction to change the word "is" to "in"
11 which I think --

12 A. That makes sense. That's fine.
13 Because this made absolutely no sense the way it was
14 written.

15 MR. MIKHAIL: Are we on the record? I
16 just want to make a very brief statement. I
17 have no objection to you asking him the
18 question or him answering, but I want to make
19 sure he checked it against what actually
20 appeared in the textbook as opposed to us or
21 you changing wording in a paragraph.

22 But feel free to ask him questions but
23 I do want the record to reflect I object if,
24 in fact, we're changing something in what, in
25 fact, appeared in a textbook. I object to

*** Notes ***

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1 opinions as to what it costs the State of
2 Florida to treat, from a taxpayer's money,
3 public health care expenditures on
4 cardiovascular disease.

5 That is not what he's being offered for.

6 BY MR. ANDRADE:

7 Q. Your testimony will be limited to
8 providing a price list, if you will, based on your
9 experience as a physician who either conducts
10 certain procedures and charges a certain amount?

11 MR. MIKHAIL: And not only his but what
12 the market is, and what's in the market. He
13 knows what other -- that's our understanding.
14 If I'm incorrect, you may correct me.

15 THE WITNESS: No. I would agree.

16 BY MR. ANDRADE:

17 Q. You will offer testimony from the --
18 I'm not sure if it's adequately or accurately
19 characterized as opinion testimony, but you will
20 offer fact testimony as to what you might charge,
21 what colleagues might charge --

22 A. That's correct.

23 Q. -- and also what a range of the charges
24 might be given that managed care might pay
25 differently than government and perhaps third-party

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1 that.

2 MR. ANDRADE: I'll tell you what.
3 Would it be acceptable, Charles, if what we
4 did was to obtain a copy of the original and
5 send it in and have that marked for the
6 records? And it will indeed have the right
7 text. And of course if somehow the text of
8 the original varies from the connection that
9 we think will make this an accurate
10 translation, then the doctor can review the
11 transcript and --

12 MR. MIKHAIL: I think that's the
13 practical way to do it. You can ask him
14 assuming that the text appeared as it
15 appeared with his correction, what your
16 opinion is about that. But again, we'll have
17 to check it and supplement the record.

18 MR. ANDRADE: With that assumption, I
19 won't read the statement again. I just want
20 to ask you if you agree with it and perhaps
21 you can give it back to me.

22 MR. MIKHAIL: I'm not trying to be
23 difficult. I just wanted to make sure.

24 MR. ANDRADE: That's fine.

25 MR. MIKHAIL: So you weren't hurt for

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1 that long or too long.
2 THE WITNESS: The only thing that I
3 would question is, it makes the comment that,
4 "-- less strong if derived from cohort or
5 case controlled studies. Weakness is derived
6 from descriptive studies or from clinical
7 experience of one or a few experts."
8 The only question I would raise
9 is, it depends upon the clinical experience
10 of the experts. If this is someone who has
11 been around for a year or two versus someone
12 who is has been around for 30 or 40 years,
13 that would be my only question.
14 BY MR. ANDRADE:
15 Q. You would agree, Doctor, that your
16 patient population is not a random population in the
17 scientific sense, would you not?
18 A. That's correct.
19 Q. For whatever reason they self-select
20 you and they decide to come to you for health care,
21 so it is not a random sample in the scientific sense
22 that's been accomplished?
23 A. That's correct.
24 MR. ANDRADE: No more questions.
25 (Thereupon, a discussion was held off

1 the record.)
2 (Witness excused.)
3 (Thereupon, at 4:55 p.m., the
4 deposition was concluded.)
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*** Notes ***

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CERTIFICATE

CERTIFICATE OF OATH

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2
3
4 STATE OF FLORIDA)
5 COUNTY OF PALM BEACH)
6
7
8 I hereby certify that I have read the
9 foregoing deposition by me given, and that the
10 statements contained therein are true and correct to
11 the best of my knowledge and belief.
12
13 Dated this _____ day of _____, 1997.
14
15
16
17
18
19 James L. Whittle, M.D.

1
2 The State of Florida)
3 County Of Palm Beach.)
4 I, the undersigned authority, certify
5 that James L. Whittle, M.D. personally appeared
6 before me and was duly sworn.
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*** Notes ***

CERTIFICATE

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The State of Florida }
County Of Palm Beach }

I, Cynthia Hektner, Court Reporter, do hereby certify that I was authorized to and did report said deposition in stenotype and that the foregoing pages, numbered from 157 to 309, inclusive, are a true and correct transcription of my shorthand notes of said deposition.

I further certify that I am not attorney or counsel of any of the parties, nor am I a relative or employee of any attorney or counsel or party connected with the action, nor am I financially interested in the action.

The foregoing certification of this transcript does not apply to any reproduction of the same by any means unless under the direct control and/or direction of the certifying reporter.

Dated this 19th day of May, 1997.

Cynthia Hektner

May 19, 1997

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Dear Ms. Wagner,

Enclosed with your copy of the deposition you will find an errata sheet for use by James L. Whittle, M.D.

I have found in the past that it occasionally creates a hardship for a particular witness to come to my office to read the original. The compromise that causes the least disruption to people's schedules is to let them read their attorney's copy, fill out the errata sheet, and send it directly to the attorney holding the original, thus saving time.

In order that there be no confusion, a copy of this letter is also appended to the deposition.

If this creates any problems, please feel free to contact me at my office (407-659-4155).

Sincerely,

Cyndie Hektner

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